



CITY OF SEWARD
City Council
Regular Meeting
Agenda

Tuesday, March 1, 2022

7:00 PM

Municipal Building Council Chambers

NOTICE IS HEREBY GIVEN that a meeting of the City Council of the City of Seward, Nebraska will be held at 7:00 PM on Tuesday, March 1, 2022, in the Council Chambers, 142 7th Street, Seward, Nebraska in which the meeting will be open to the public. The Mayor and City Council reserve the right to adjourn into Closed Session as per Section 84-1410 of the Nebraska Revised Statutes. An Agenda for such meeting, kept continually current, is available at the Office of the City Clerk, 537 Main Street, Seward, Nebraska, during normal business hours. Individuals requiring physical or sensory accommodations, who desire to attend or participate, please contact the City Clerk's Office at 402.643.2928 no later than 3:30 PM on the Friday preceding the Council Meeting.

City financial claims and related invoices will be available for Council member review, audit and voluntary signatures at Council Chambers beginning 30 minutes prior to the scheduled meeting time.

CALL TO ORDER

PLEDGE OF ALLEGIANCE

DISCLOSURE OF OPEN MEETINGS ACT & OTHER NOTIFICATIONS

This is an Open Meeting of the Seward Nebraska Governing Body. The City of Seward abides by the Nebraska Open Meetings Act in conducting business. A copy of the Nebraska Open Meetings Act is displayed on the north wall of this meeting room facility as required. Disclosure of meeting recording processes is posted in the Meeting Room. A participant sign-in sheet is available for use by any Citizen addressing the Council. Presenters shall approach the podium, state their name & address for the Clerk's record and are asked to limit remarks to five minutes. All remarks shall be directed to the Mayor who shall determine by whom any appropriate response shall be made. The City of Seward reserves the right to adjust the order of items on this Agenda if necessary and may elect to take action on any of the items listed.

ROLL CALL

MINUTES

1. Draft Minutes of February 15, 2022 Meeting - City Clerk Bargmann

February 15, 2022

The Seward City Council met at 7:00 p.m. on Tuesday, February 15, 2022 with Mayor Joshua Eickmeier presiding and City Clerk Derek Bargmann recording the proceedings. Upon roll call, the following Councilmembers were present: Alyssa Hendrix, Sid Kamprath, Jessica Kolterman, Karl Miller, John Singleton, Jonathon Wilken, Matt Stryson. Councilmembers Absent: Ellen Beck. Other officials present: City Administrator Greg Butcher, City Attorney Kelly Hoffschneider, Library Director Becky Baker, Building/Zoning & Code Enforcement Tim Dworak, City Engineer Michael Oneby, and Chief of Police Brian Peters.

Notice of the meeting was given in advance thereof by the method of communicating advance notice of the regular and special meetings of the City Council of the City of Seward, Nebraska, as stated in Ordinance No. 2015-08, which was adopted on the 5th day of May, 2015; said method stating that the notice of such meeting, with the agenda thereon, be posted in the following places: City Hall, Municipal Building, Seward County Courthouse, CityofSewardNE.com, and Seward Memorial Library. The certificate of posting notice is attached to these minutes. Notice of this meeting was simultaneously given to the Mayor and all members of the City Council and a copy of their acknowledgment of receipt of notice and the agenda are attached to these minutes. Availability of the agenda was communicated in the advance notice and in the notice to the Mayor and Council of this meeting. All proceedings hereafter shown were taken while the convened meeting was open to the attendance of the public.

THE PLEDGE OF ALLEGIANCE

Mayor Eickmeier announced that a copy of the Agenda for this meeting is posted in the Council Chambers of the Municipal Building and copies are available where a copy of the Open Meetings Act is also posted for public inspection. He also noted that any citizen wishing to address the Council should come to the podium, state their name and address and limit their comments to five minutes. All remarks should be directed to the Mayor/Chairperson, who will then determine who will make any appropriate response. The City of Seward reserves the right to adjust the order of items on this agenda if necessary and may elect to take action on any of the items listed.

APPROVAL OF MINUTES OF FEBRUARY 1, 2022 COUNCIL MEETING

Councilmember Singleton moved, seconded by Councilmember Miller, that the minutes of the February 1, 2022 City Council meeting be approved.

Aye: Hendrix, Kamprath, Kolterman, Miller, Singleton, Wilken, Stryson.

Nay: None.

Absent: Beck. Motion carried.

CONSENT AGENDA CONSIDERATION ITEMS

The following Consent Agenda items were approved in one single motion made by Councilmember Singleton, seconded by Councilmember Stryson:

1. Claims & Payables Reports

CLAIMS LIST
2-15-22

COUNCIL MEETING

Abbreviations: BE, Benefits; BU, Building Upkeep; CI, Capital Improvements;

February 15, 2022

DO, Donations; EQ, Equipment; EX, Expense; FA, Fixed Asset; GS, Gas; GU, Ground Upkeep; IT, Technology; IV, Inventory; MA, Maintenance; MC, Miscellaneous; MH, Merchandise; MI, Mileage; ML, Meals; MS, Memberships; OI, Oil; OP, Operations; PO, Postage; PU, Publications; RE, Repairs; RI, Reimbursement; SA, Salaries, SE, Services; SL, Sales; ST, Sales Tax; SU, Supplies; TG, Training; TO, Tools; TR, Transfer; UN, Uniforms; UT, Utilities,

Aclara Technologies LLC	FA	41,113.00
ADE	SU	158.43
AKRS Equipment Inc	RE	967.90
All Copy Products Inc	MA	13.35
All Road Barricades Inc	SU	1,536.78
Almquist Maltzahn Gallowa	SE	31,300.00
Amazon.Com Credit Service	SU	856.84
Badger Meter	SE	151.23
Baker & Taylor	SU	3,381.65
Bishop Michael	RI	31.00
Bizco Technologies	IT	1,253.09
Black Hills Energy	UT	2,416.93
Blue Cross Blue Shield Ne	BE	63,277.58
Border States Industries	IV	5,327.69
Campbell Cleaning	SE	1,350.00
Capital Business-Cheyenne	MA	17.78
Cash-Wa Distributing Co	SU	373.27
City Seward Electric Fund	UT	41,758.41
City Seward General Fund	TR	303,620.74
City Seward Library Petty	PO	151.84
City Seward Merchant Serv	SE	2,274.26
City Seward Payroll Accou	SA	330,713.07
City Seward Perpetual Fd	SL	1,200.00
Clark Enersen Partners	DO	902.60
Consolidated Water Soluti	SU	1,558.64
Danko Emergency Equipment	EQ	63.54
Emergency Medical Product	SU	585.34
Farmers Coop Seward	GS	4,201.62
Fastenal Company	SU	476.06
GALLS LLC	UN	613.77
H&S Plumb Heat & Air Inc	BU	176.20
Hach Company	SU	589.42
Hobson Automotive & Tire	RE	152.00
Husker Electric Supply Co	SU	1,897.95
Jackson Services Inc	SU	81.64
Jacobsen Rock & Gravel	GU	18,726.40
JEO Consulting Group	SU	4,741.25
Jones Bank	FA	13,760.00
Last Mile Network Consult	IT	90.00
Lincoln Winwater Works	SU	14.00
Luebbe Sharon	CI	8,500.00
Lynn Peavey Co	SU	74.10
Matheson Tri-Gas Inc	OP	134.49
Mead Lumber & Rental-York	RE	75.24
Meyer Automotive	RE	219.68
Mid-American Benefits Inc	BE	4,929.93
Midwest Auto Parts	SU	189.80
Midwest Automotive Inc	RE	1,065.55
Midwest Laboratories Inc	MA	626.94
Midwest Service & Sales	SU	4,310.00
Midwest Tire Deals	FA	2,500.00

February 15, 2022

Municipal Supply Omaha	SU		159.32
Nebraska Equipment Inc	OI		321.84
Nebraska Transportation	CI		92,980.24
Nebraska Treasurer	MC		96.38
Odeys Inc	GU		405.16
One Call Concepts Inc	SE		46.66
Oneby Michael	OP		90.00
O'Reilly Automotive Inc	RE		225.58
Orscheln Farm & Home	SU		744.73
Overhead Door Co-Lincoln	BU		175.00
Pac 'N' Save Discount Foo	ML		2,633.66
Paper Tiger Shredding	SE		30.00
Pitney Bowes Inc	OP		105.00
Plunkett'S Pest Control	BU		61.99
Principal Financial Group	BE		2,364.57
Quill Corp	SU		383.45
Reed Electric	SE		373.56
Richters Inc	BU		2,842.25
Rolling Acres Complex	SE		108.00
Sapp Brothers Petroleum I	GS		11,906.70
Schemmer Architects Engin	CI		1,749.35
Seward County Chamber & D	RI		153.03
Seward County Clerk/Reg D	SE		120.00
Seward County Independent	PU		839.04
Seward County Treasurer	SE		15,949.25
Seward Electronics	OP		163.53
Seward Lumber & Home Cent	SU		892.56
Seward Public Schools	MC		55.31
Seward Wind LLC	UT		51,545.80
Sleight William	SE		300.00
Smith Sara	MC		400.00
Total Tool Supply Inc	TO		2,495.00
U S A Bluebook - Cust 812	SU		675.06
Verizon Wireless	SE		245.82
Visa - Pinnacle Bank			4,101.46
AWE Learning	IT	3,468.00	
Bluestem Network	SE	115.00	
Country Sampler	MS	42.78	
Harlequin	SU	27.93	
History Nebraska	MS	35.00	
Hobby Lobby	SU	20.26	
Party City	SU	15.00	
Sam's Club	SU	329.68	
Walmart	SU	31.78	
Zoom	MS	16.03	
Voehl Cindy	MI		9.36
Wesco Distribution Inc	IV		1,679.90
Windham Weaponry	TG		450.00
Windstream Nebraska Inc	SE		1,915.99
York County Emergency M	SE		32.00
York Equipment	RE		50.48
	CLAIMS TOTAL		\$1,104,378.03

2. City Treasurer Report
3. City Codes Director Report
4. Police Department Report

February 15, 2022

Aye: Hendrix, Kamprath, Kolterman, Miller, Singleton, Wilken, Stryson.
Nay: None.
Absent: Beck. Motion carried.

CONFIRMATION OF MAYOR APPOINTMENTS

1. APPOINT MEMBERS TO VARIOUS BOARDS AND COMMITTEES

Councilmember Kamprath moved, seconded by Councilmember Kolterman, that Mayor Eickmeier's appointments to the following Boards and Commissions be confirmed:

Dr. Elizabeth Neeley (replaces Corey Gray) to the Civil Service Commission for the Remainder of Term.

Aye: Hendrix, Kamprath, Kolterman, Miller, Singleton, Wilken, Stryson.
Nay: None.
Absent: Beck. Motion carried.

ADMINISTRATIVE ITEMS

1. PRESENTATION AND ACCEPTANCE OF SEWARD MEMORIAL LIBRARY ANNUAL REPORT

Library Director Baker presented the annual report.

Mayor Eickmeier and City Administrator Butcher recognized the challenges the Library has faced over the past few years and praised the work of Baker and her staff.

Councilmember Wilken moved, seconded by Councilmember Kamprath that the Seward Memorial Library Annual Report be approved

Aye: Hendrix, Kamprath, Kolterman, Miller, Singleton, Wilken, Stryson.
Nay: None.
Absent: Beck. Motion carried.

2. RESOLUTION APPROVING AN INTERLOCAL COOPERATION AGREEMENT WITH THE SEWARD COUNTY SCHOOL DISTRICT 0009 (SEWARD PUBLIC SCHOOLS) RELATED TO A WELLNESS CENTER

Mr. Butcher provided an overview of the progress undertaken to reach this point. He noted that to establish an increased sales tax, the City would have to enter an interlocal agreement, and the School District made the most sense as a partner. The School Board unanimously approved the establishment of this interlocal agreement. Mr. Butcher also noted that the resolution of the ballot question presented as the next item will be the exact language included in the May 10, 2022 primary election.

Dr. Matt Dominy, 1970 Rainbow Ave, provided an overview of the financial aspects of the project. He thanked the Village of Staplehurst for providing a portion of their CCCFF Grant funding to assist Seward in planning this project. In sum, 110+ pledgers have donated a total of \$6.7 million to the project. Dr. Dominy noted that the group has been encouraged by the Peter Kiewit Foundation to complete an application for grant funding. Additionally, the project is awaiting a funding announcement for the shovel-ready grant through the State which could be up to \$5 million. In addition to the Kiewit and shovel-ready grants, Dr. Dominy noted the group was pursuing further grant funding opportunities in the near term.

February 15, 2022

Jana Hughes, 1825 Deer Run Drive, noted the group has continued work with BVH Architecture on preliminary design for the facility. Ms. Hughes described the project utilizing the plans provided in the council packet. Ms. Hughes noted that in Phase II of the project (not included in plans currently), there is potential to add a fieldhouse as well as an additional basketball court. Overall, the facility is projected to be 62,000 sq. feet. Regarding facilities, Mr. Butcher noted the group, including himself, visited numerous wellness centers to garner reasonable expectations for design and operation of this project should it move forward. He further noted that the group would prepare a Request for Qualification (RFQ) for final design shortly, and then if the ballot is approved, the group would select an engineering firm to complete the final design shortly after May 10th.

Councilmember Stryson, who has provided technical guidance to the project, praised the work of the Seward Changing the Game group and believes this is a great project for the City.

Ms. Hughes opined that there are three things that make this attempt different than past attempts to build the Wellness Center: 1). Location—placement near the Seward Middle School and the trail; 2). Operation—the City has agreed to operate the facility if built; and 3). Sales Tax Opportunity—this option was not previously available.

Councilmember Hendrix queried if the other fitness centers/gyms were in support of the project. Ms. Hughes opined the other fitness-centric businesses and the Wellness Center reached different clientele and believes they can all coexist. She mentioned the possibility of a yoga studio such as Om Shanti, whose owner is supportive of the project, utilizing the fitness center facilities to offer a class as a means of advertising their business.

Councilmember Miller commended the efforts of the group, particularly in learning from prior attempts and presenting a better package this time. Regarding financial aspects, he believes that the 10 or so years it will take to pay off the bonds will be a bargain as it will ensure a generation of use for Seward residents. Councilmember Kolterman also expressed her support and believes this project is needed in the City to attract and retain young families.

Councilmember Hendrix inquired about the how the Seward Changing the Game group would transition if the project moves forward. Dr. Dominy believes the nonprofit would still exist, but shift focus to securing funds for capital improvements of the facility. Mr. Butcher mentioned the group would work with the School, City and future Executive Director of the facility, to ensure smooth operation. Further, Mr. Butcher mentioned that a Foundation could be created, much in the same way as the Seward Memorial Library.

Councilmember Hendrix inquired about level of finish and voiced concerns about rising construction costs. Ms. Hughes responded the goal of materials included would be high durability and ease of maintenance. Further, she added that the general contractor and architectural firm had projected those rising costs and budgeted \$50 more per sq. foot as a means of safely anticipating what the highest cost for construction could be.

Paul Grieger of D.A. Davidson & Co., spoke to the bond aspects of the project should the sales tax vote be approved. He mentioned that if the vote passes, then the terms of the bonds will be determined and the bonds could be sold in multiple releases. Councilmember Kamprath queried about the time restraints on the issuance of these bonds. Mr. Grieger responded that no

February 15, 2022

constraints exist on the issuance of bonds following approval of the sales tax vote. He mentioned the Council would have flexibility in ironing out the terms of the bonds and issuance, but projected that rates would increase in the coming years.

Councilmember Kamprath introduced the following resolution:

CITY OF SEWARD

RESOLUTION NO. 2022-6

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF SEWARD, NEBRASKA APPROVING AN INTERLOCAL COOPERATION AGREEMENT WITH SEWARD COUNTY SCHOOL DISTRICT 0009 (SEWARD PUBLIC SCHOOLS) RELATED TO A WELLNESS CENTER.

WHEREAS, Article XV, Section 18 of the Constitution of the State of Nebraska and the Interlocal Cooperation Act (Chapter 13, Article 8, Reissue Revised Statutes of Nebraska, as amended, the “Interlocal Act”) authorize any two or more public agencies to exercise jointly any power or powers, privileges or authority exercised or capable of exercise by any of the participating public agencies, and to enter into agreements with one another for such purposes.

WHEREAS, each of the City and Seward County School District 0009 (each a “Party” and, collectively, the “Parties”) is a “public agency” as defined in the Interlocal Act.

WHEREAS, each Party deems it necessary, desirable, advisable and in its best interest to enter into an interlocal agreement with respect to a wellness center and other related infrastructure projects (the “Projects”) of the City (the “Agreement”).

WHEREAS, each Party desires to enter into the Agreement to (i) create a separate administrative committee relating to the Projects, which are public infrastructure projects, and (ii) include provisions, including benchmarks, relating to the long-term development of such public infrastructure projects between the Parties.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Seward, Nebraska, that the City shall enter into an Interlocal Cooperation Agreement with Seward County School District 0009 (Seward Public Schools), and the Mayor and City Clerk be and they are hereby authorized to execute on behalf of the City said Agreement in substantially the form presented but with any changes as such officers shall deem appropriate for and on behalf of the City.

This resolution shall be in full force and take effect from and after adoption as provided by law.

PASSED AND APPROVED THIS ____ DAY OF FEBRUARY, 2022.

CITY OF SEWARD, NEBRASKA

Mayor

February 15, 2022

ATTEST:

City Clerk

Councilmember Kolterman moved, seconded by Councilmember Wilken, to approve Resolution 2022-6, approving the interlocal agreement between the City of Seward and the Seward County School District 0009.

Aye: Hendrix, Kamprath, Kolterman, Miller, Singleton, Wilken, Stryson.

Nay: None.

Absent: Beck. Motion carried.

3. RESOLUTION PLACING A BALLOT QUESTION ON THE MAY 10, 2022 ELECTION TO APPROVE AN INCREASE IN THE LOCAL OPTION SALES AND USE TAX BY AN ADDITIONAL ONE-HALF PERCENT (1/2%)

Councilmember Kolterman introduced the following resolution:

RESOLUTION NO. 2022-7

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF SEWARD, NEBRASKA, PLACING A BALLOT QUESTION ON THE BALLOT FOR THE STATEWIDE PRIMARY ELECTION ON MAY 10, 2022, TO APPROVE AN INCREASE IN THE LOCAL OPTION SALES AND USE TAX BY AN ADDITIONAL ONE-HALF OF ONE PERCENT.

WHEREAS, the City of Seward (the "City") has imposed a local sales and use tax at a current rate of one and one-half percent (1.50%) pursuant to Nebraska Revised Statute § 77-27,142; and

WHEREAS, upon affirmative vote of at least 70% of the members of the City Council of the City, the Nebraska Local Option Revenue Act (Nebraska Revised Statutes § 77-27,142, *et seq.*) authorizes the City to submit to voters at a primary election held within the City a proposal to approve a modification of the existing City sales and use tax to a rate greater than one and one-half percent (1.50%); and

WHEREAS, the City Council finds that it is necessary to fund the costs of infrastructure improvement of the city, which shall include a wellness center to be owned by the City (the "Facilities") by increasing the sales and use tax by one-half of one percent (0.50%) (the "Additional Sales Tax") to a rate of two percent (2.00%); and

WHEREAS, the wellness center is expected to including facilities and equipment to improve the health and well-being of the citizens of Seward, and is expected to provide recreational programming, before and after school care, and be available for use by the general public at rates and fees set by the City Council, and

WHEREAS, no reductions or elimination of other taxes or fees are expected to result from the imposition of the Additional Sales Tax, and no savings or efficiencies are expected to result from the Facilities.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Seward, Nebraska:

Section 1. That at the statewide primary election to be held on Tuesday, May 10, 2022, there shall be submitted to a vote of the qualified electors of the City of Seward, Nebraska, for adoption or rejection, the following ballot question:

BALLOT QUESTION

Shall the City Council of the City of Seward, Nebraska, increase the local sales and use tax rate by one-half of one percent (0.50%) upon the same transactions within the City of Seward on which the State of Nebraska is authorized to impose a tax, with all revenues generated by the additional one-half percent (0.5 %) to be used for public infrastructure projects under the following terms and conditions?

- (1) Revenues generated by the additional one-half of one percent (0.50%) shall be used to pay the costs to construct, acquire, improve, furnish, and equip public infrastructure improvements of the City, which shall include a wellness center to be owned by the City.
- (2) Expiration of Tax Rate Change. The increased sales and use tax rate will be implemented and related revenues collected beginning as soon as practicable after voter approval and continuing for a period of ten (10) years, unless bonds are issued with some or all of the additional revenues pledged for payment of such bonds, in which case the increased sales and use tax rate will remain in effect and additional revenues will be collected until payment in full of such bonds and any refunding bonds.
- (3) Interlocal Agreement. The City of Seward and Seward County School District 0009 have entered into an Interlocal Agreement for the long-term development of unified governance of public infrastructure projects in the City. Additional revenue collected from the additional one-half percent (0.5%) sales and use tax will not be used for the purposes of such Interlocal Agreement, but will be used for the public infrastructure projects of the City of Seward as described above.

VOTE FOR or AGAINST

- I vote FOR authorizing an increase of one-half percent (.5%) in the City of Seward's local sales and use tax under such terms and conditions
- I vote AGAINST authorizing an increase of one-half percent (.5%) in the City of Seward's local sales and use tax under such terms and conditions

If a majority of the votes cast upon such question shall be in favor, then the governing body of the City of Seward shall be empowered as provided by Section 77-27,142 to levy said sales and use tax and shall proceed to impose a tax pursuant to the Local Option Revenue Act. If a majority of those voting on the question shall be opposed to such tax, then the governing body of the City of Seward shall not impose such sales and use tax.

Section 2. The City Clerk of the City shall be and hereby is authorized and directed to certify a copy of this Resolution to the County Clerk/Election Commissioner of Seward County not later than March 1, 2022, who shall designate polling places and determine voting procedures as set out in the Election Act, appoint the election officials and otherwise conduct the election as provided by law. The City does hereby agree to reimburse said County for the expenses of conducting the election. As required by the Election Act, the County Clerk/Election Commissioner shall provide for publication of the Notice of Election in a newspaper designated by the County Clerk/Election Commissioner no later than forty-two (42) days prior to the day of said election.

Section 3. The form of ballot and form of notice of said election shall be substantially in the form submitted to this meeting, a copy of which forms shall be made a part of the minutes. The City Clerk is hereby authorized and directed, in conjunction with the County Clerk/Election Commissioner conducting the election, to arrange for the printing of the necessary ballots for said election and to do all other things and take all other action appropriate or necessary in order to cause said proposition to be submitted to the qualified electors of the City as above provided.

PASSED AND APPROVED THIS ____ DAY OF FEBRUARY, 2022.

CITY OF SEWARD, NEBRASKA

Mayor

ATTEST:

City Clerk

Councilmember Miller moved, seconded by Councilmember Kamprath, to approve Resolution 2022-7, placing a ballot question on the May 10, 2022 election in regards to a local option sales and use tax.

Aye: Hendrix, Kamprath, Kolterman, Miller, Singleton, Wilken, Stryson.

February 15, 2022

Nay: None.

Absent: Beck. Motion carried.

4. CONSIDERATION OF A RESOLUTION TO DESIGNATE ONE PARKING SPACE IN FRONT OF
612 SEWARD STREET AS TEN MINUTE PARKING

Mr. Butcher mentioned this is a reiteration of an item previously considered and the business owner would like to make a renewed request.

Shannon Meyer, 1965 S Imig Drive, has requested reconsideration of his request of a ten-minute parking stall in front of 612 Seward Street. Mr. Meyer believes due to the nature of his business; a ten-minute parking stall would be beneficial to operation. Additionally, he opined that nearby businesses would benefit from the stall, as his clientele would not always be utilizing this stall. Moreover, he expressed his flexibility in placement of the stall and that it didn't necessarily have to be in front of the 612 Seward Street building.

Councilmember Hendrix expressed concerns about the enforcement of this stall if it were created as well as many additional requests that could come with approval of this stall. Mr. Butcher responded it would be enforced by the Community Service Officer during regular business hours. He mentioned this was currently the only request that has been received to date.

Councilmember Kamprath raised the possibility of limiting the designation of a ten-minute stall to one per block (both sides of the street). Mr. Butcher responded that a uniform policy could be established and enforced moving forward if it is the Council's desire. Mayor Eickmeier mentioned the biggest issue with parking in the downtown area isn't lack of spaces, but instead, utilization by non-customers for a lengthy period daily.

Councilmember Miller broached the possibility of establishing this spot west of the current handicap stall in front of Merle's Flower Shop, to improve safety and visibility for commuters. City Engineer Oneby responded that the current handicap stall in question is not ADA-compliant currently and would be moved at a future date. Mr. Butcher would not recommend moving the ten-minute stall in front of Merle's without first gaining their approval, which would delay the granting of the request.

Councilmember Kamprath moved, seconded by Councilmember Kolterman, to amend the presented resolution to establish a policy of designating a maximum of one ten-minute stall per block.

Aye: Kamprath, Kolterman, Miller, Wilken, Stryson.

Nay: Hendrix, Singleton.

Absent: Beck. Motion carried.

Councilmember Kamprath introduced the following amended resolution:

RESOLUTION NO. 2022-8

WHEREAS, Section 382-4.4 of the City Municipal Code of the City of Seward, Nebraska provides that the City may, by Resolution, prohibit or fix the time for parking or stopping of vehicles on any street or streets as may be designated in such resolution;

WHEREAS, it is deemed necessary to prohibit or fix an amount of time for parking and stopping of vehicles on portions of streets as hereinafter

February 15, 2022

designated in the City of Seward, Nebraska.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF SEWARD, NEBRASKA THAT:

1. The parking of motor vehicles will be limited to "Ten Minute Parking" between the hours of 6 a.m. and 12 a.m. No vehicles shall be parked or permitted to stand or stop, whether attended or unattended for more than ten minutes during 6 a.m. and 12 a.m. on the following describe areas or portions of streets, to-wit:

a. Beginning ten (10) feet east of the center line of the alley between 6th and 7th Streets, intersecting Seward St, thence east thirteen feet nine inches (13'9") consisting of one (1) diagonal off street parking space on the north side of Seward Street, as depicted on the attached "Figure 1".

2. The above designated parking space shall be indicated by a sign which is in conformance with the most current addition of the Highway Administration manual on Uniform Traffic Control Devices for streets and highways and such other appropriate lines and markings shall be placed at said locations as are authorized by the City Code of the City of Seward, Nebraska

3. Only one ten minute parking stall shall be designated per block. For purposes of this resolution a "block" shall include parking on both sides of the street.

4. All previous resolutions in conflict with this resolution as they relate of the above described area or portion of street are hereby revoked

Dated: _____ day of _____, 2022

THE CITY OF SEWARD, NEBRASKA

ATTEST:

Joshua Eickmeier, Mayor

Derek Bargmann
City Clerk

Councilmember Kolterman moved, seconded by Councilmember Miller, to approve the amended Resolution 2022-8, placing a ten-minute parking stall in front of 612 Seward Street.

Aye: Kamprath, Kolterman, Miller, Wilken, Stryson.

Nay: Hendrix, Singleton.

Absent: Beck. Motion carried.

February 15, 2022

5. RESOLUTION DESIGNATING A PRIVATE DRIVE LOCATED BETWEEN 3RD STREET AND 4TH STREET IN CNG 1ST ADDITION AS 'ADDIE LANE'

Building/Zoning and Code Enforcement Director Dworak provided an overview of this item. This issue began due to addressing issues for residents who live on the private street. To resolve the issue, it is proposed that a private drive be established. The private drive will be known as 'Addie Lane' and will not be serviced by the City. The new private lane will be reported to 911 services to ensure they are served in the event of an emergency.

Councilmember Kamprath inquired as to the number of private drives currently existing in the City. Mr. Dworak has identified 14-15 different streets currently, which will now be re-signed with blue street signs to indicate they are private drives and not serviced by the City.

Councilmember Kolterman introduced the following resolution:

RESOLUTION NO. 2022-9

WHEREAS, the City Council of the City of Seward, Nebraska may by resolution assign a name to street or private drive, and

WHEREAS, it is deemed advisable to name the private drive hereinafter designated in the City of Seward, Nebraska; and

WHEREAS, the residents of CNG 1st Addition support the naming of the private drive,

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF SEWARD, NEBRASKA THAT:

The naming of the following private drive, more particularly describe as follows:

The private drive between 3rd Street and 4th Street as originally platted in CNG 1st Addition, Seward, Seward County Nebraska, is hereby named "Addie Lane" and the appropriate City officials are hereby authorized, empowered, and directed to place appropriate signs designating the name.

The Mayor declared the resolution adopted.

Dated: _____, 2022

THE CITY OF SEWARD, NEBRASKA

ATTEST:

Joshua Eickmeier, Mayor

Derek Bargmann
City Clerk

Councilmember Stryson moved, seconded by Councilmember Kamprath, to approve Resolution 2022-9, designating 'Addie Lane'.

Aye: Hendrix, Kamprath, Kolterman, Miller, Singleton, Wilken, Stryson.
Nay: None.

February 15, 2022

Absent: Beck. Motion carried.

6. RESOLUTION DESIGNATING CITY ITEMS AS SURPLUS

Mr. Butcher noted that designation of items as surplus was the requirement before the City could sell or dispose of unneeded items. He mentioned that in the near future code may be updated to revise disposal thresholds.

Councilmember Singleton introduced the following resolution:

RESOLUTION NO. 2022-10

WHEREAS, the City of Seward, Nebraska has the authority to sell personal property owned by the City; and

WHEREAS, as outlined under Section 44-1.26 of the City Code, in order for the City to sell property having a value of \$5,000 or more, the City Council shall declare said property as surplus property and approve its disposal; and

WHEREAS, as outlined under Section 44-1.26 of the City Code, in order for the City to sell property having a value of \$5,000 or less, a listing of said property shall be posted; and

WHEREAS, the Governing Body determines that the City Administrator should act and that items should be sold and disposed of by the City of Seward; and

WHEREAS, the City of Seward, Nebraska has the following described property:

City of Seward - Surplus Property Items:

Pop Machine - located at Seward Community Golf Course
Patio Furniture - located at Seward Community Golf Course
Cash Register - located at Seward Community Golf Course
(3) DirectTV Receiver Boxes - located at Seward Community Golf Course
1997 Toro 580-D 16' Mower (3069 Hours) - located at Seward Community Golf Course
125 Gallon Boom Sprayer - located at Plum Creek storage Shed
Vicon Spreader - located at Plum Creek storage shed
Swenson Spreader EV358 - located at Wastewater Treatment Plant
1995 Swenson Salt Spreader - located at Wastewater Treatment Plant
2000 Swenson Salt Spreader - located at Wastewater Treatment Plant
11' Angle Dozer Plow 42" tall (RVD1142-PL20) - located at Wastewater Treatment Plant
Loftness 7' Snowblower - located at Wastewater Treatment Plant
Irrigation Pump - located at Wastewater Treatment Plant
2011 Ford Crown Victoria Police Car - located at Wastewater Treatment Plant
Wooden Shed (from 216 N 8th Property) - located at Wastewater Treatment Plant
2011 Ford Cargo Van E150 - located at Wastewater Treatment Plant
Cardboard Baler - located at Wastewater Treatment Plant
Bunn Coffee maker - located at City hall
(2) Office Swivel Chairs - located at City Hall
Metal Video Cart with wheels - located at City Hall
(2) Wooden desks - located at City Hall
Gestetner 3220 Photo Copier - located at City Hall
(2) Wooden side tables - located at City Hall
Wooden Wall cabinet - located at City Hall

February 15, 2022

- Wooden Folding Table - located at City Hall
- (5) Wall Partition Panels - located at City Hall
- Metal Wall Organizer - located at City Hall
- Antique Wooden Chair - located at City Hall
- Epson Artisan 1430 Printer - located at City Hall
- Rocketfish 32"-70" TV Mount - located at City Hall

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF SEWARD, NEBRASKA THAT:

That the above described property be sold or destroyed by the City of Seward in accordance with the procedures set forth in Section 44-1.26 of the Seward City Code.

The Mayor declared the resolution adopted.

Dated this _____ day of _____, 2022

THE CITY OF SEWARD, NEBRASKA

ATTEST:

Joshua Eickmeier,
Mayor

Derek Bargmann
City Clerk

Councilmember Stryson moved, seconded by Councilmember Kolterman, to approve Resolution 2022-10, designation of items as surplus.

Aye: Hendrix, Kamprath, Kolterman, Miller, Singleton, Wilken, Stryson.
Nay: None.
Absent: Beck. Motion carried.

7. CONSIDERATION OF APPROVAL OF A REVISED INTERLOCAL AGREEMENT WITH THE SEWARD/SALINE COUNTY SOLID WASTE MANAGEMENT AGENCY

Mr. Butcher mentioned the only change to the interlocal agreement is the inclusion of the Village of Garland.

Councilmember Kamprath moved, seconded by Councilmember Singleton, to approve the amended interlocal agreement with Seward/Saline County Solid Waste Management Agency.

Aye: Hendrix, Kamprath, Kolterman, Miller, Wilken, Singleton, Stryson.
Nay: None.
Absent: Beck. Motion carried.

8. RECOMMEND JUSTIN S. BALDINGER AS MANAGER OF COBBLESTONE HOTELS & SUITES, 2575 PROGRESSIVE ROAD, CLASS I LIQUOR LICENSE

Councilmember Singleton moved, seconded by Councilmember Stryson, to approve the recommendation presented.

Aye: Hendrix, Kamprath, Kolterman, Miller, Wilken, Singleton, Stryson.
Nay: None.
Absent: Beck. Motion carried.

February 15, 2022

9. CONSIDERATION OF A REQUEST FROM CITY ADMINISTRATION FOR THE APPROVAL OF SALE AND CONSUMPTION OF ALCOHOLIC BEVERAGES AT THE LIED SENIOR CENTER FOR THE EMPLOYEE ANNUAL AWARDS BANQUET

City Administrator Butcher stated the event would happen on Saturday, March 5, 2022 to celebrate the 2020 and 2021 years.

Councilmember Miller moved, seconded by Councilmember Singleton, to approve the request from City Administration.

Aye: Hendrix, Kamprath, Kolterman, Miller, Wilken, Singleton, Stryson.

Nay: None.

Absent: Beck. Motion carried.

REPORTS

1. CITY ADMINISTRATOR'S REPORT

Councilmember Kolterman moved, seconded by Councilmember Kamprath, that City Administrator Butcher's report of February 15, 2022 be accepted.

Aye: Hendrix, Kamprath, Kolterman, Miller, Singleton, Wilken, Stryson.

Nay: None.

Absent: Beck. Motion carried.

FUTURE REQUESTS FOR COUNCIL AGENDA ITEMS OR ADMINISTRATIVE ACTION

None.

ANNOUNCEMENT OF UPCOMING EVENTS

February 17, 2022 - DTR Meeting (Seward Memorial Library)

February 21, 2022 - SCCDP Board Meeting (Chez Bubba)

February 24, 2022 - COVID Zoom

MOTION TO ADJOURN

Councilmember Singleton moved, seconded by Councilmember Wilken, that the February 15, 2022 City Council Meeting be adjourned.

Aye: Hendrix, Kamprath, Kolterman, Miller, Singleton, Wilken, Stryson.

Nay: None.

Absent: Beck. Motion carried.

Adjourned approximately 8:31 p.m.

THE CITY OF SEWARD, NEBRASKA

Joshua Eickmeier, Mayor

Derek Bargmann
City Clerk

CONSENT AGENDA

1. Claims & Payables Reports

CLAIMS LIST
3-1-22

COUNCIL MEETING

Abbreviations: BE, Benefits; BU, Building Upkeep; CI, Capital Improvements; DO, Donations; EQ, Equipment; EX, Expense; FA, Fixed Asset; GS, Gas; GU, Ground Upkeep; IT, Technology; IV, Inventory; MA, Maintenance; MC, Miscellaneous; MH, Merchandise; MI, Mileage; ML, Meals; MS, Memberships; OI, Oil; OP, Operations; PO, Postage; PU, Publications; RE, Repairs; RI, Reimbursement; SA, Salaries, SE, Services; SL, Sales; ST, Sales Tax; SU, Supplies; TG, Training; TO, Tools; TR, Transfer; UN, Uniforms; UT, Utilities,

Aqua-Chem Inc	MA		401.20
Barco Municipal Products	SU		795.61
Blue Cross Blue Shield Ne	BE		61,478.82
Bluestem Network LLC	SE		100.00
Capital Business-Dallas	MA		523.92
Carroll Construction Supp	SU		16.50
Cash-Wa Distributing Co	ML		111.03
Chase Card Service			7,347.58
54th Street - Saint Joseph	ML	80.54	
Adobe	MS	577.41	
Amazon	SU	1,420.39	
ASCE	MS	306.95	
Captial Overhead Door	BU	103.17	
Constant Contact	SE	20.00	
Dragon Palace	ML	139.21	
Ehlers Electronics	SU	0.56	
Epic Sports	SU	443.34	
Expedia	TG	542.44	
Hardware World	SU	133.90	
Holiday Inn	TG	533.07	
JD's Coffee	MC	228.83	
Menard's	SU	183.16	
Microsoft	MS	158.90	
NFPA Natl Fire Protect	MS	190.95	
OG Supply	SU	38.40	
Pacific Cascade	SU	115.35	
Physical Ed Equip	SU	186.32	
Runza	ML	206.67	
Sam's Club	SU	224.02	
SpareTime Lounge	ML	117.00	
ULINE	SU	84.61	
Univ of Neb-Omaha	TG	393.00	
USPS	PO	82.03	
Valentino's	ML	90.57	
Walmart	SU	532.90	
Zoom	MS	213.89	
City Seward Buildings/Gr	RI		3,000.00
City Seward Library Petty	PO		199.14
City Seward Payroll Accou	SA		164,083.46

Continental Fire/Alarm/De	SE	195.00
Dominy Madison	SE	35.00
Eakes Office Solutions	SU	26.16
Eberspacher Jena	SE	35.00
Fast Mart	GS	33.31
Fastenal Company	SU	115.41
Foreup Golf Software Inc	IT	455.00
Gpm	CI	7,013.00
Great Plains Communicatio	SE	490.00
Green Madison	SE	35.00
Hartman Tarynn	SE	35.00
Helmlink Printing/Grph Inc	SU	90.00
Herring Emmalee	SU	35.00
Holiday Inn-Kearney	TG	344.85
Home Depot Pro	SU	234.16
Javorsky Tim	SE	100.00
Last Mile Network Consult	IT	75.30
Lee'S Refrigeration	BU	2,764.65
Lintt Mark	RI	39.99
Lliteras Keira	SE	35.00
Memorial Health-Drug	SE	254.00
Menards North	SU	418.96
Meyer Automotive	RE	142.95
Mid-American Benefits Inc	BE	500.00
Midwest Turf & Irrigation	RE	370.89
Municipal Supply Omaha	IV	1,223.10
Myers Matthew	MS	25.00
Nebraska D A S Acct Ocio	MA	231.00
Nebraska Dept Env/Energy	MS	40.00
Orscheln Farm & Home	SU	248.40
Piitz Lonnie	SE	150.00
Principal Financial Group	BE	2,324.81
Quill Corp	SU	19.98
Reams Sprinkler Supply	TG	75.00
Resco	IV	12,750.00
Riverside Portables Llc	SE	95.00
Schaefer Jeffi	SE	35.00
Schulz Eden	SE	35.00
Seward Electronics	RE	46.28
Short Elliott Hendrickson	CI	46,548.35
Storey Kenworthy / Matt P	SU	555.23
Stutzman Ona	SU	35.00
Time Warner Cable	SE	764.62
U S Postal Service	MS	4,500.00
Valley Corporation	CI	380,155.00
Verizon Wireless	SE	89.10
Volvik Usa Inc	MH	468.00
Wesco Distribution Inc	IV	2,056.54
	CLAIMS TOTAL	\$704,401.30

2. Seward County Chamber & Development Partnership Report

QUARTERLY REPORT SUMMARY

Prepared for SCCDP Members • February 2022

- Beck's Hybrids announced they'll be building a 96,000 square foot warehouse and expanding in Goehner to grow their company into Nebraska (Beck's 15th state in the U.S.).
- ALLO Communications announced that they'll be building fiber-to-the home in Milford and Seward.
- The SCCDP was awarded a \$30,000 Communities for Kids grant from Nebraska Children and Families Foundation to work on filling child care services gap in Seward County in partnership with child care providers (workforce development issue). Seward County has an identified service gap of 60 children.
- The SCCDP hosted two large events including 11th annual Seward Christmas Festival on November 27, 2021 (hosted over 950 children to meet Santa and Mrs. Claus) and Annual Awards Banquet to celebrate the accomplishments of members, business leaders, and citizens in Seward County.
- Jonathan attended two conferences in December 2021 (Economix and MidAmerica Economic Development Council Competitiveness Conference) to build relationships with site selectors and economic development professional colleagues from across the U.S.
- Submitted proposals for renewable energy company (Project Green at Seward I-80 Site), family-owned manufacturer of organic/non-GMO/and conventional animal feeds (Project Scoop at Seward Rail Campus), manufacturing company (Project Steel at Seward Rail Campus, Seward I-80 Exit Site, Knox Site, and Northwest Milford Site), and window manufacturing company (Project Big House at Seward Rail Campus).
- Hosted site visits for telecommunications company on November 23, commercial ag contracting company on December 10, Nebraska Department of Economic Development staff on December 16, manufacturer and warehouse company on January 19, and food processing company on January 25.
- Connected resources for LB 840, TIF, grants, and/or available building & land to various business owners including companies that want to start or expand a storage business in Seward, insect producer in Seward, renovate existing second floor in downtown Seward for housing, Seward Missile Silo project in partnership with UNL (Grand Challenge project) and Seward County Commissioners, general store in Bee, event space in downtown Milford, tanning business in Seward, and child development center in Utica.

[Click here to view the SCCDP 2021 in Review Video.](#)

**QUESTIONS OR FOLLOW UP?
CONTACT:
JONATHAN JANK
402-570-8020**

**THANK YOU TO OUR QUARTERLY REPORT
SUMMARY SPONSORS!**

Cattle
— BANK & TRUST —

JonesBank

MEET THE TEAM



MEMBERSHIP COORDINATOR, HARRISON HELMER

• The Membership Coordinator is responsible for working with their teammates, members, and community volunteers to accomplish the short and long-term goals of the Seward County Chamber & Development Partnership (SCCDP) related to maintaining current relationships with members while seeking new membership and sponsorship opportunities for the SCCDP. This position helps the President & CEO work to fulfill the Vision Statement 2035.

MARKETING & EVENTS DIRECTOR, LEANNE MILLER

• The Marketing & Events Director is responsible for working with their teammates, members, and community volunteers to accomplish the short and long-term goals of the Seward County Chamber & Development Partnership (SCCDP) related to marketing/communications and all aspects of event planning and execution. This position helps the President & CEO work to fulfill the Vision Statement 2035.



COMMUNITY AFFAIRS DIRECTOR, JACOB JENNINGS

• The Community Affairs Director is responsible for working with the Seward County Chamber & Development Partnership (SCCDP) President & CEO, members, and community volunteers to create strategies to strengthen Seward County's workforce and housing development activities and find solutions to relevant community issues. This position also leads SCCDP's legislative efforts including building relationships with elected officials and advocating for policies, regulations, and programs which benefit the Seward County business community. This position helps the President & CEO work to fulfill the Seward County Vision Statement 2035.

ADMINISTRATIVE ASSISTANT, HAYLEY STEINBAUER, ERIN MAIER, ANGELINA STINSON & GAGE SMITH

• The Administrative Assistant is responsible for working with their teammates, members, and community volunteers to accomplish the short and long-term goals of the Seward County Chamber & Development Partnership (SCCDP) related to maintaining SCCDP's office systems and equipment, including ensuring bookkeeping and payroll are completed by an accounting contractor on a weekly basis, responding to general communications, assisting with events, helping members and visitors feel welcome, and providing administrative support as needed. This position helps the President & CEO work to fulfill the Vision Statement 2035.



PRESIDENT & CEO, JONATHAN JANK

• The President & CEO is the chief executive officer of the Seward County Chamber & Development Partnership (SCCDP) and directs all activities necessary to meet the objectives and implement policy, as established by the Board of Directors. This executive position is accountable for the effective and efficient operation of all organizational activities of the SCCDP to move Seward County forward to fulfill the Vision Statement 2035. Reports to the SCCDP Board of Directors; responsible for leadership and development of professional staff members.



3. Refuse Hauler's Annual License Application - Bel-Con Refuse



PAID

FEB 25 2022

CITY OF SEWARD

P.O. Box 38, 537 Main Street, Seward, Nebraska 68434. Phone: 402-643-2928. Fax: 402-643-6491. www.CityofSewardNE.gov

2022 APPLICATION FOR LICENSE TO COLLECT, HAUL OR CONVEY GARBAGE OR REFUSE FOR HIRE

Application is hereby made to the City of Seward, Nebraska for an annual Refuse Hauler's License in accordance with Chapter 335, Article II of the Municipal Code of the City of Seward by:

Michael Feulner 402-768-3402
APPLICANT'S NAME TELEPHONE NO.

345 E Pinewood Ave Seward NE 68434
APPLICANT'S ADDRESS CITY STATE ZIP

345 E Pinewood Ave Seward NE 68434
BUSINESS LOCATION CITY STATE ZIP

The Following Vehicles will be used for these services:

Michael Feulner 1-2012 Freightliner Garbage Truck-White
OWNERSHIP NUMBER/KIND OF VEHICLE DESCRIPTION

Michael Feulner 1-1998 Freightliner Roll-off Truck-White
OWNERSHIP NUMBER/KIND OF VEHICLE DESCRIPTION

Michael Feulner 1-2005 Dodge Truck Truck w/ Tipper
OWNERSHIP NUMBER/KIND OF VEHICLE DESCRIPTION

OWNERSHIP NUMBER/KIND OF VEHICLE DESCRIPTION

OWNERSHIP NUMBER/KIND OF VEHICLE DESCRIPTION

Please return this form, along with \$25.00 per vehicle, to the City of Seward, P.O. Box 38, Seward, NE 68434 - No later than December 31, 2021

Michael Feulner 2/24/22
SIGNATURE OF APPLICANT DATE

BOND FILED WITH THE CITY CLERK IN THE SUM OF \$1,000.00

Dated: 2/25/22 Bonding Company: Western Surety
\$75

\$75 2/25/22
LICENSE FEE OWED DATE PAID LICENSE ISSUED/DATES

Date approved by City Council: _____

City Clerk

PUBLIC HEARINGS

1. Public Hearing - 7:00 PM - Presentation and Discussion of Functioning and Progress of the Seward Economic Development Plan - City Administrator Butcher

**CITIZENS ADVISORY REVIEW COMMITTEE
FOR THE LB 840 ECONOMIC DEVELOPMENT PLAN
SEMI-ANNUAL REVIEW REPORT**

To: The Seward City Council
From: Citizens Advisory Review Committee - LB 840 Economic Development Plan
Date: March 1, 2022
Re: Semi-annual review report required by the Economic Development Plan

The Citizens Advisory Review Committee (CARC) is a committee of registered voters appointed by the Mayor (and affirmed by the City Council) to review the Economic Development Plan (the Plan) established under LB 840. The CARC mainly reviews the actions taken by the LB 840 Application Review Board (ARB). The ARB is the committee that has the authority to spend the LB 840 funds.

The CARC met on February 2, 2022, to review the functioning and progress of the Plan. The meeting consisted of discussions about the following:

1. An LB 840 Activity Report was distributed to the CARC in advance of the meeting. The City Administrator walked the CARC through recent activity from July 1, 2021 thru December 31, 2021. The CARC had no questions or concerns.
2. A copy of the general ledger reports including a report of all transactions from 7/1/21 to 12/31/21 was distributed prior to the meeting. The CARC felt all transactions listed in the financial reports appeared to be appropriate.
3. The City Administrator also noted that the program would come due for a reauthorization vote by the citizens of Seward in the following year and a recommendation on the program and funding levels may be requested from the CARC in the future.

The CARC notes that it does not audit nor does it verify the numbers submitted to it in the general ledger reports. It is our understanding that these accounts are audited during the annual overall audit that is done on the city's financial records.

2. Public Hearing - 7:00 PM - Preliminary Plat of Prairie View Addition - Building/Zoning & Code Enf Director Dworak



Major Subdivision Application

City of Seward

Applications shall be submitted a minimum of 30 days prior to City Planning Commission Meeting. Planning Commission meets the 2nd Monday of each month

Date Submitted: 11-12-2021

Preliminary Plat Application Fees: \$400.00 + \$40.00 Per Lot (\$16,840), + \$100 Notification fee = \$7,340.00



PAID
Premium 11-15-2021 CLK

Name of Subdivision: Prairie View

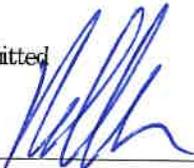
Owner/Developer: Bob Benes

Legal Description: SE + SW Quarter of the SW Quarter of S22 T11 R3E

Project Engineer: Mark Palmer Number of Lots: 171

Present Zoning: R-3 Requested Zoning: R-3

Within City Limits	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Adjacent to City Limits	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Within 2 mile area	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Annexation Requested	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Subdivision Agreement submitted	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Performance Bond Required	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>

Signed by Developer 

Preliminary Plat Review

Staff Review

Electric Dept	<input type="checkbox"/>
Street Dept	<input type="checkbox"/>
Water/Waste	<input type="checkbox"/>
Police Dept	<input type="checkbox"/>
Park/Rec Dept	<input type="checkbox"/>

Agency Review

Cable TV	<input type="checkbox"/>
Gas Co	<input type="checkbox"/>
Telephone Co	<input type="checkbox"/>
School Board	<input type="checkbox"/>
County P.C.	<input type="checkbox"/>

Final Plat Application fees: \$100.00 + \$10.00 Per Lot (\$ _____) + filing fee (_____) = _____

Aid to Construction for Electric Dept (City of Seward Resolution 8-07):
Developer fees \$400 Per Lot = \$ _____ + \$4.00 per foot of electrical line installation for lots
= _____

Neighborhood Park Dedication/Fees In Lieu Of (City of Seward Unified Land Development Ord. 410-41.5) See ULDO Article 41, Public Improvements & Infrastructure, 410-41.5 Section B, Parks and Reservations, to determine land or cash donation: _____

Date and action taken: _____ Total Fees Due: _____

Planning Commission: _____ City Council: _____

PRAIRIE VIEW DRAINAGE MEMO

Prepared for:

City of Seward
Seward, Nebraska

February, 2022

Olsson Project No. 021-04805



Prairie View Preliminary Plat - Drainage Memo

Prairie View: Background Information

This drainage memo has been prepared to analyze the impacts to stormwater flows in conjunction with the proposed Prairie View Preliminary Plat. The Prairie View development includes a land parcel of approximately 59-acres that is located in Seward, NE. The proposed Preliminary Plat site is being developed from an existing farmstead and row crop field to single family dwellings. The proposed development area is located within the limits of the Blue River Basin Watershed Management Plan.

The intent of this report is to summarize the findings of the design calculations for: site detention and runoff. No Floodplain occurs anywhere on the site.

Hydrologic and Hydraulic Analysis

A Hydrologic Analysis was performed on the site for the existing and proposed conditions. The site was divided into basins and sub-basins for each area using HydroCAD. The parameters were gathered from the topography, existing land use, proposed land use, and USDA-NRCs soil maps. The Hydraulic Analysis was also performed in HydroCAD based on similar parameters and existing structures on site.

The proposed development will be designed to ensure the change in land use does not adversely affect runoff to the adjacent properties and state right-of-way. The HydroCAD model results for proposed conditions demonstrate this for the 2-, 5-, 10-, 50- and 100-year storm events. The results of the HydroCAD modeling are provided in the Hydrologic Analysis section, below. The existing and proposed conditions are shown in the attached plan set.

There are two main drainage basins on this site. Basin A discharges to the South and West onto the adjacent property. Basin B discharges to the North into an existing culvert that crosses under E Seward Street. Existing and proposed Hydrologic and hydraulic conditions can be found below for each basin.

Existing Hydrologic and Hydraulic

Existing Hydrologic Parameters			
Condition	Area (ac)	CN	Tc (min)
Existing Basin A	50.99	84	40.2
Existing Basin B	8.04	85	27.6

Proposed Hydrologic and Hydraulic

Proposed Basin A has been split up into four sub-basins and Proposed Basin B remains as one sub-basin.

Proposed Hydrologic Parameters			
Condition	Area (ac)	CN	Tc (min)
Proposed Sub-Basin A1	25.32	87	21.7
Proposed Sub-Basin A2	10.65	87	18.3
Proposed Sub-Basin A3	17.76	87	19.3
Proposed Sub-Basin A4	2.41	87	9.0
Proposed Sub-Basin B1	6.82	87	18.9

Stormwater Detention Summary

Prairie View proposes to change the use type conditions, therefore, requires additional detention. This detention will be handled by two ponds that both retain and provide 1' of freeboard above the 100-year event. The outlet structure for Pond 1 will be a single 30" pipe with a 3' x 3' reinforced concrete box that is 4' tall with a trash rack and has a 0.5' open slot in the front of the box. More details on the outlet structure can be found on the Preliminary Plat. Adjacent lots will have a minimum opening set at least 1' above the 100-year elevation. Modeling for the pond can be found in the following report and the results are shown below.

Proposed Hydrograph Routing – Detention Pond 1					
Event	Peak Inflow (cfs)	Peak Outflow (cfs)	Peak Water Surface Elevation (ft)	Volume (ac-ft)	Overtop Elevation
2 – Year	45.9	21.7	1470.33	1.0	1474.10
5 – Year	66.6	43.9	1470.80	1.3	
10 – Year	84.0	47.7	1471.31	1.6	
50 – Year	114.5	53.4	1472.36	2.4	
100 – Year	130.5	56.2	1472.90	2.8	

The second cell, Pond 2, will have a similar outlet structure to Pond 1. It is a single 36" pipe with a 4' x 4' reinforced concrete box that is 4.5' tall with a trash rack and has a 1.5' open slot in the front of the box. More details on the outlet structure can be found on the Preliminary Plat. Adjacent lots will have a minimum opening set at least 1' above the 100-year elevation. Modeling for the pond can be found in the following report and the results are shown below.

Proposed Hydrograph Routing – Detention Pond 2					
Event	Peak Inflow (cfs)	Peak Outflow (cfs)	Peak Water Surface Elevation (ft)	Volume (ac-ft)	Overtop Elevation
2 – Year	68.9	46.5	1457.02	0.9	1462.50
5 – Year	104.2	70.3	1458.27	1.6	
10 – Year	144.3	78.1	1459.27	2.3	
50 – Year	193.3	88.6	1460.78	3.6	
100 – Year	215.6	93.3	1461.51	4.3	

Hydrologic and Hydraulic Results

Existing and post-development peak flows from Basin A are shown in the table below. Every storm event shows a decrease in flow post-development.

Peak Flows from Basin A (cfs)			
	Existing	Development	Change
2 – Year	55.1	46.5	-8.6
5 – Year	84.4	70.3	-14.1
10 – Year	109.1	78.1	-31.0
50 – Year	152.2	88.6	-63.6
100 – Year	174.8	93.3	-81.5

Existing and post-development peak flows from Basin B are shown in the table below. The post-development flows slightly increase due to the area along Sunflower Avenue (Sub-Basin B1.1) being added to Basin B that originally went to Basin A.

Peak Flows from Basin B (cfs)			
	Existing	Development	Change
2 – Year	11.6	13.6	+2.0
5 – Year	17.5	19.6	+2.1
10 – Year	22.4	24.7	+2.3
50 – Year	31.0	33.5	+2.5
100 – Year	35.5	38.2	+2.7

Summary

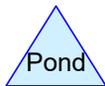
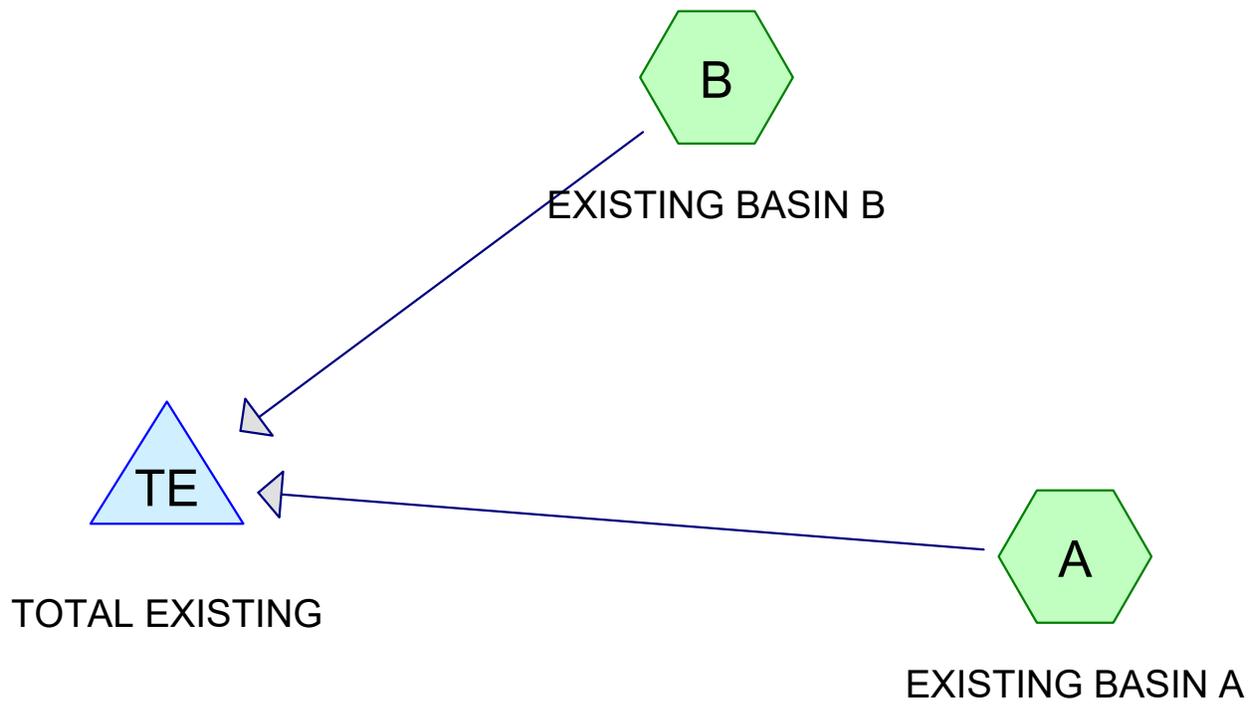
Prairie View has been designed in conformance with the City of Seward Storm Sewer Design Standards. Stormwater detention shall be provided by two cells located within the site. The proposed development will not adversely impact adjacent properties, upstream or downstream of the project. Design calculations supporting information above are included as attachments to this document.

F:\2021\04501-05000\021-04805\40-DESIGN\EXHIBITS\DRAINAGE REPORT\PRAIRIE VIEW DRAINAGE MEMO.DOCX

EXHIBITS

HYDROCAD

PRE-DEVELOPMENT



22-02-17_GNCV_Drainage Report_02104805

Prepared by Olsson

HydroCAD® 10.10-6a s/n 06508 © 2020 HydroCAD Software Solutions LLC

Printed 2/17/2022

Page 2

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2 - Year	Type II 24-hr		Default	24.00	1	3.00	2
2	5 - Year	Type II 24-hr		Default	24.00	1	3.93	2
3	10 - Year	Type II 24-hr		Default	24.00	1	4.69	2
4	50yr	Type II 24-hr		Default	24.00	1	6.00	2
5	100 - Year	Type II 24-hr		Default	24.00	1	6.68	2

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Page 3

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.290	77	2 acre lots, 12% imp, HSG C (A)
0.365	74	>75% Grass cover, Good, HSG C (B)
0.505	98	Paved parking, HSG C (B)
53.870	85	Row crops, straight row, Good, HSG C (A, B)
59.030	84	TOTAL AREA

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Page 4

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
59.030	HSG C	A, B
0.000	HSG D	
0.000	Other	
59.030		TOTAL AREA

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Page 5

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	4.290	0.000	0.000	4.290	2 acre lots, 12% imp	A
0.000	0.000	0.365	0.000	0.000	0.365	>75% Grass cover, Good	B
0.000	0.000	0.505	0.000	0.000	0.505	Paved parking	B
0.000	0.000	53.870	0.000	0.000	53.870	Row crops, straight row, Good	A, B
0.000	0.000	59.030	0.000	0.000	59.030	TOTAL AREA	

2-YEAR

22-02-17_GNCV_Drainage Report_02104805

Type II 24-hr 2 - Year Rainfall=3.00"

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Page 6

Time span=1.00-100.00 hrs, dt=0.02 hrs, 4951 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA: EXISTING BASIN A Runoff Area=50.990 ac 1.01% Impervious Runoff Depth=1.53"
Flow Length=2,220' Tc=40.2 min CN=84/98 Runoff=55.11 cfs 6.497 af

SubcatchmentB: EXISTING BASIN B Runoff Area=8.040 ac 6.28% Impervious Runoff Depth=1.59"
Flow Length=1,320' Tc=27.6 min CN=84/98 Runoff=11.56 cfs 1.069 af

Pond TE: TOTALEXISTING Inflow=64.28 cfs 7.565 af
Primary=64.28 cfs 7.565 af

Total Runoff Area = 59.030 ac Runoff Volume = 7.565 af Average Runoff Depth = 1.54"
98.27% Pervious = 58.010 ac 1.73% Impervious = 1.020 ac

Summary for Subcatchment A: EXISTING BASIN A

Runoff = 55.11 cfs @ 12.37 hrs, Volume= 6.497 af, Depth= 1.53"
 Routed to Pond TE : TOTAL EXISTING

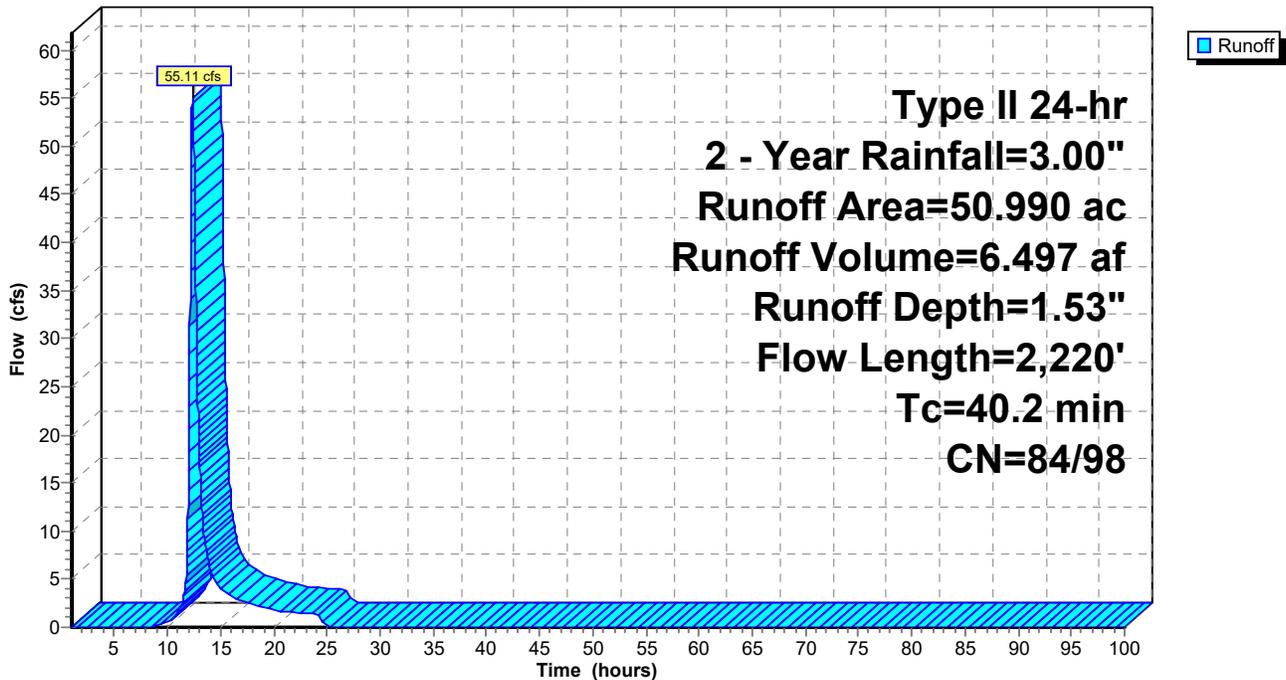
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 2 - Year Rainfall=3.00"

Area (ac)	CN	Description
4.290	77	2 acre lots, 12% imp, HSG C
46.700	85	Row crops, straight row, Good, HSG C
50.990	84	Weighted Average
50.475	84	98.99% Pervious Area
0.515	98	1.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	200	0.0150	0.20		Sheet Flow, SHEET n= 0.120 P2= 3.00"
23.7	2,020	0.0250	1.42		Shallow Concentrated Flow, SHALLOW Cultivated Straight Rows Kv= 9.0 fps
40.2	2,220	Total			

Subcatchment A: EXISTING BASIN A

Hydrograph



Summary for Subcatchment B: EXISTING BASIN B

Runoff = 11.56 cfs @ 12.22 hrs, Volume= 1.069 af, Depth= 1.59"
 Routed to Pond TE : TOTAL EXISTING

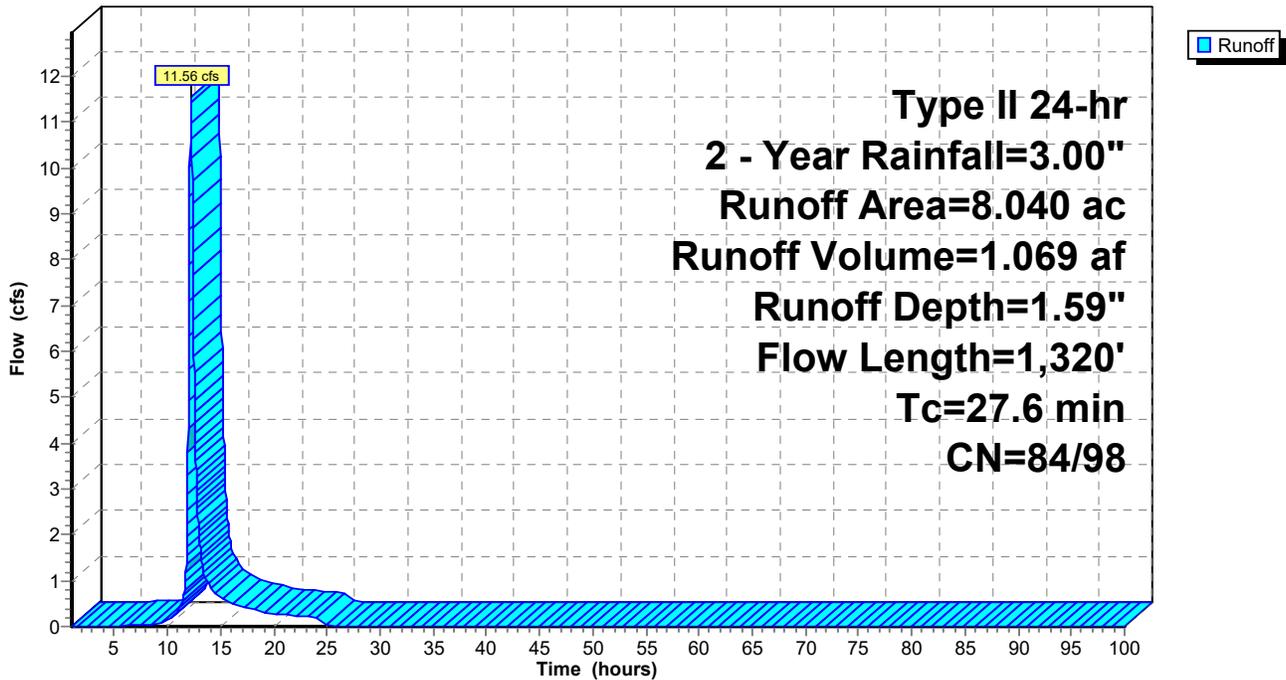
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 2 - Year Rainfall=3.00"

Area (ac)	CN	Description
0.505	98	Paved parking, HSG C
0.365	74	>75% Grass cover, Good, HSG C
7.170	85	Row crops, straight row, Good, HSG C
8.040	85	Weighted Average
7.535	84	93.72% Pervious Area
0.505	98	6.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	200	0.0150	0.20		Sheet Flow, SHEET n= 0.120 P2= 3.00"
11.1	1,120	0.0350	1.68		Shallow Concentrated Flow, SHALLOW Cultivated Straight Rows Kv= 9.0 fps
27.6	1,320	Total			

Subcatchment B: EXISTING BASIN B

Hydrograph



Summary for Pond TE: TOTAL EXISTING

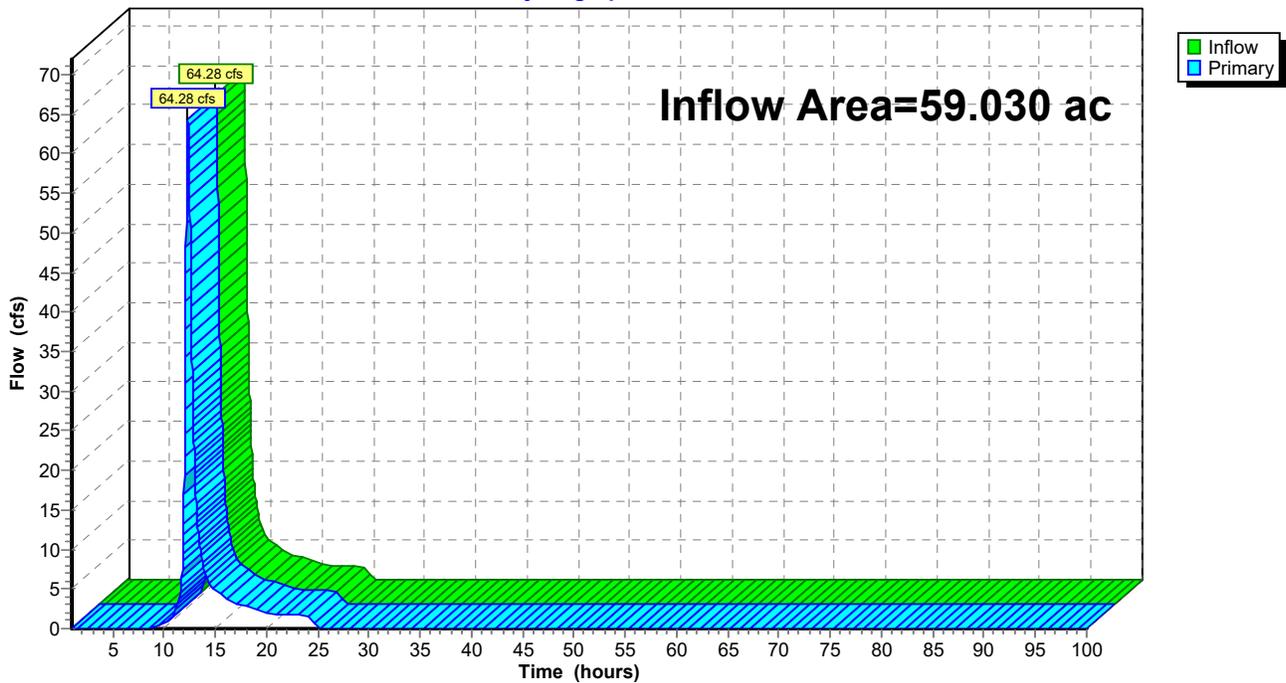
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 59.030 ac, 1.73% Impervious, Inflow Depth = 1.54" for 2 - Year event
Inflow = 64.28 cfs @ 12.35 hrs, Volume= 7.565 af
Primary = 64.28 cfs @ 12.35 hrs, Volume= 7.565 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond TE: TOTAL EXISTING

Hydrograph



5-YEAR

22-02-17_GNCV_Drainage Report_02104805

Type II 24-hr 5 - Year Rainfall=3.93"

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Page 10

Time span=1.00-100.00 hrs, dt=0.02 hrs, 4951 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA: EXISTING BASIN A Runoff Area=50.990 ac 1.01% Impervious Runoff Depth=2.32"
Flow Length=2,220' Tc=40.2 min CN=84/98 Runoff=84.42 cfs 9.873 af

SubcatchmentB: EXISTING BASIN B Runoff Area=8.040 ac 6.28% Impervious Runoff Depth=2.40"
Flow Length=1,320' Tc=27.6 min CN=84/98 Runoff=17.45 cfs 1.606 af

Pond TE: TOTALEXISTING Inflow=98.32 cfs 11.479 af
Primary=98.32 cfs 11.479 af

Total Runoff Area = 59.030 ac Runoff Volume = 11.479 af Average Runoff Depth = 2.33"
98.27% Pervious = 58.010 ac 1.73% Impervious = 1.020 ac

Summary for Subcatchment A: EXISTING BASIN A

Runoff = 84.42 cfs @ 12.37 hrs, Volume= 9.873 af, Depth= 2.32"
 Routed to Pond TE : TOTAL EXISTING

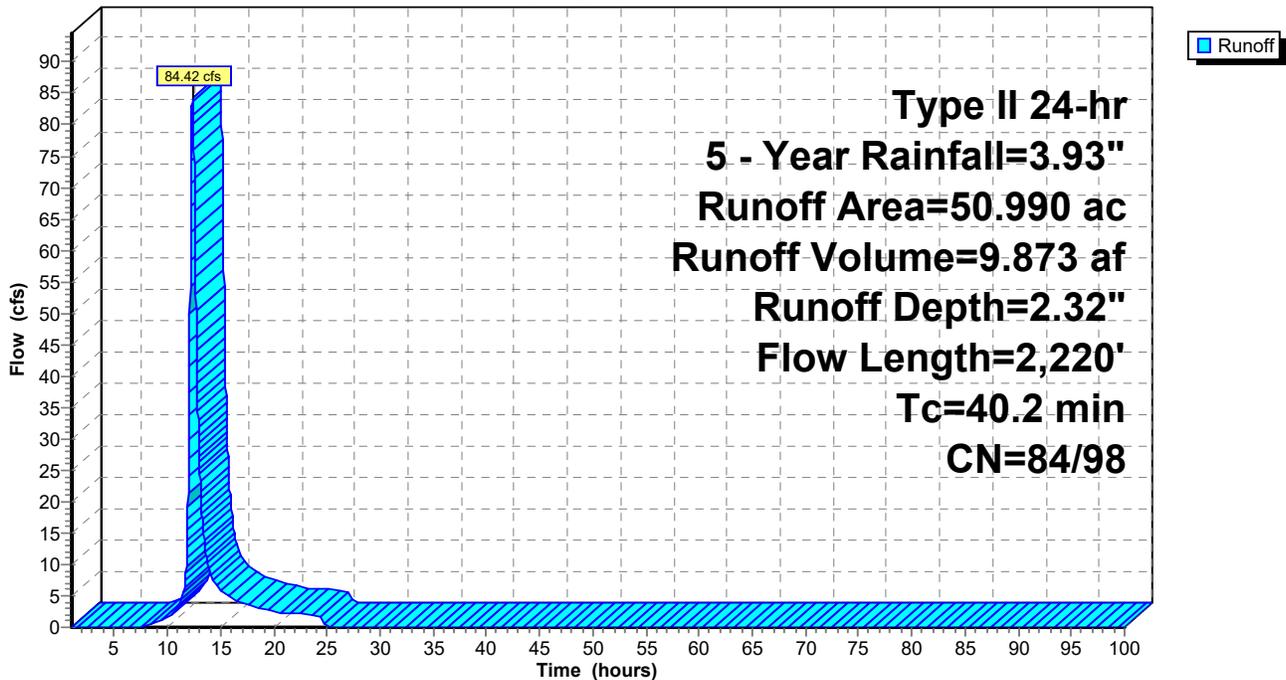
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 5 - Year Rainfall=3.93"

Area (ac)	CN	Description
4.290	77	2 acre lots, 12% imp, HSG C
46.700	85	Row crops, straight row, Good, HSG C
50.990	84	Weighted Average
50.475	84	98.99% Pervious Area
0.515	98	1.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	200	0.0150	0.20		Sheet Flow, SHEET n= 0.120 P2= 3.00"
23.7	2,020	0.0250	1.42		Shallow Concentrated Flow, SHALLOW Cultivated Straight Rows Kv= 9.0 fps
40.2	2,220	Total			

Subcatchment A: EXISTING BASIN A

Hydrograph



Summary for Subcatchment B: EXISTING BASIN B

Runoff = 17.45 cfs @ 12.21 hrs, Volume= 1.606 af, Depth= 2.40"
 Routed to Pond TE : TOTAL EXISTING

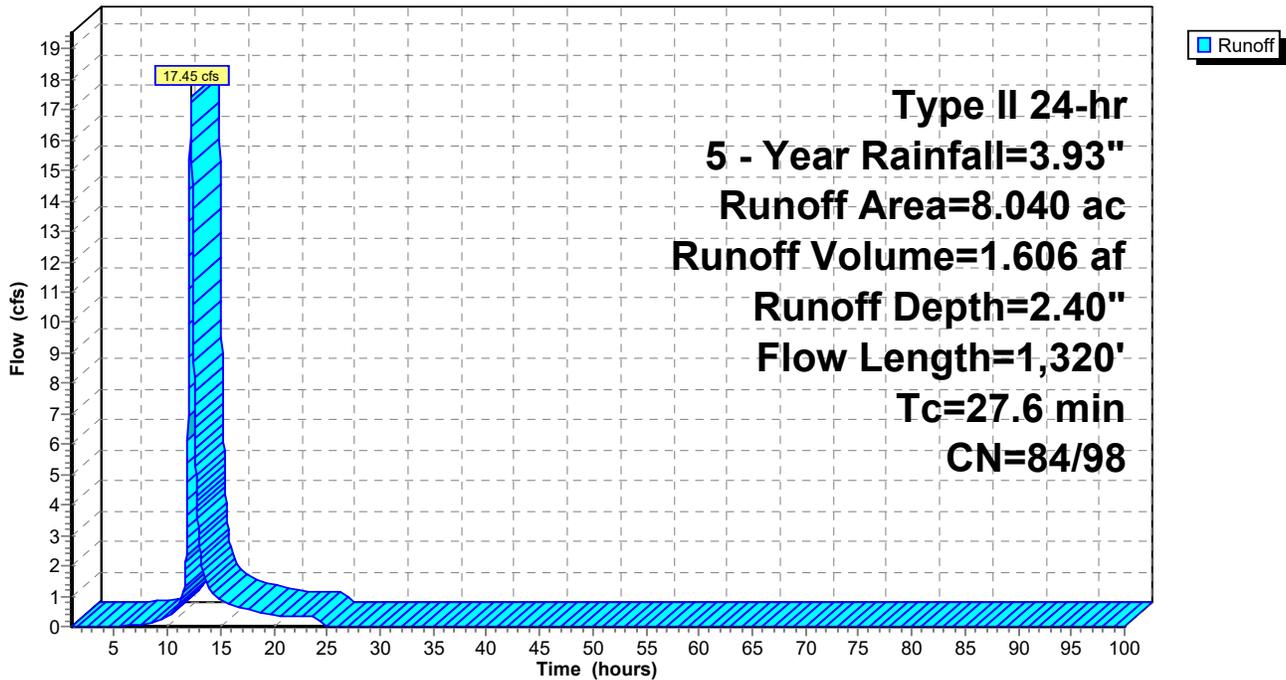
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 5 - Year Rainfall=3.93"

Area (ac)	CN	Description
0.505	98	Paved parking, HSG C
0.365	74	>75% Grass cover, Good, HSG C
7.170	85	Row crops, straight row, Good, HSG C
8.040	85	Weighted Average
7.535	84	93.72% Pervious Area
0.505	98	6.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	200	0.0150	0.20		Sheet Flow, SHEET n= 0.120 P2= 3.00"
11.1	1,120	0.0350	1.68		Shallow Concentrated Flow, SHALLOW Cultivated Straight Rows Kv= 9.0 fps
27.6	1,320	Total			

Subcatchment B: EXISTING BASIN B

Hydrograph



Summary for Pond TE: TOTAL EXISTING

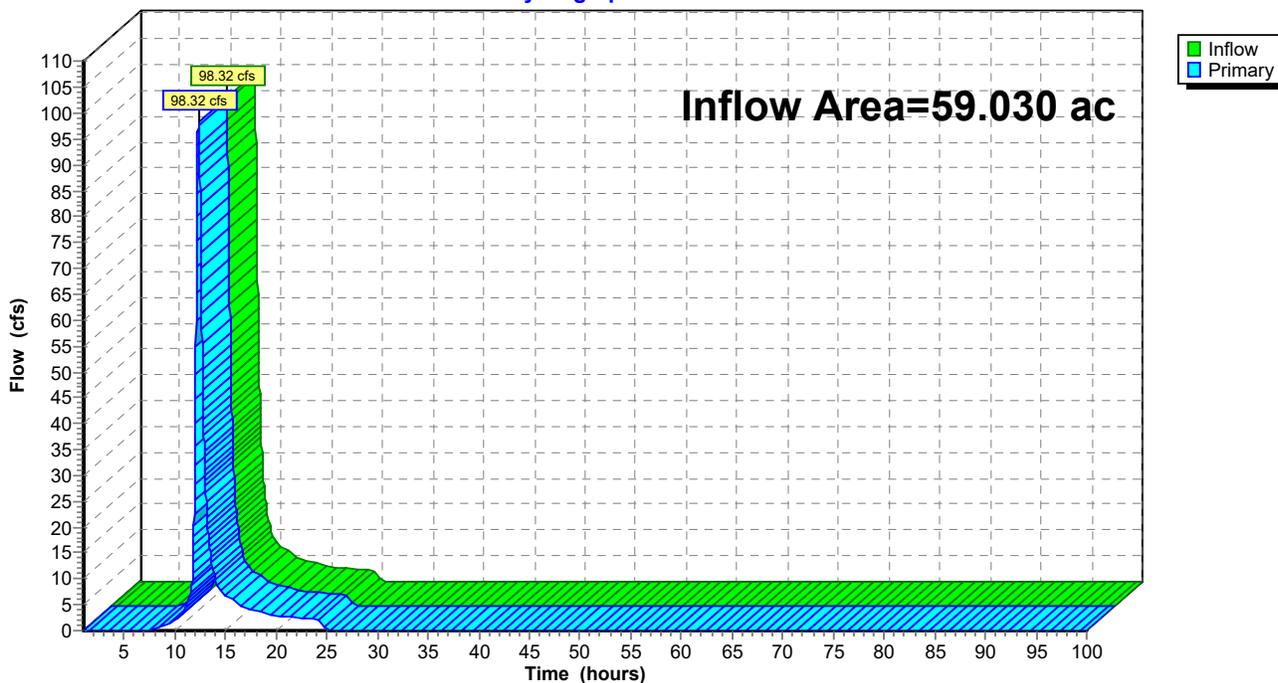
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 59.030 ac, 1.73% Impervious, Inflow Depth = 2.33" for 5 - Year event
Inflow = 98.32 cfs @ 12.34 hrs, Volume= 11.479 af
Primary = 98.32 cfs @ 12.34 hrs, Volume= 11.479 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond TE: TOTAL EXISTING

Hydrograph



10-YEAR

22-02-17_GNCV_Drainage Report_02104805

Type II 24-hr 10 - Year Rainfall=4.69"

Prepared by Olsson

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Page 14

Time span=1.00-100.00 hrs, dt=0.02 hrs, 4951 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA: EXISTING BASIN A Runoff Area=50.990 ac 1.01% Impervious Runoff Depth=3.00"
Flow Length=2,220' Tc=40.2 min CN=84/98 Runoff=109.05 cfs 12.760 af

SubcatchmentB: EXISTING BASIN B Runoff Area=8.040 ac 6.28% Impervious Runoff Depth=3.08"
Flow Length=1,320' Tc=27.6 min CN=84/98 Runoff=22.40 cfs 2.064 af

Pond TE: TOTALEXISTING Inflow=127.01 cfs 14.824 af
Primary=127.01 cfs 14.824 af

Total Runoff Area = 59.030 ac Runoff Volume = 14.824 af Average Runoff Depth = 3.01"
98.27% Pervious = 58.010 ac 1.73% Impervious = 1.020 ac

Summary for Subcatchment A: EXISTING BASIN A

Runoff = 109.05 cfs @ 12.37 hrs, Volume= 12.760 af, Depth= 3.00"
 Routed to Pond TE : TOTAL EXISTING

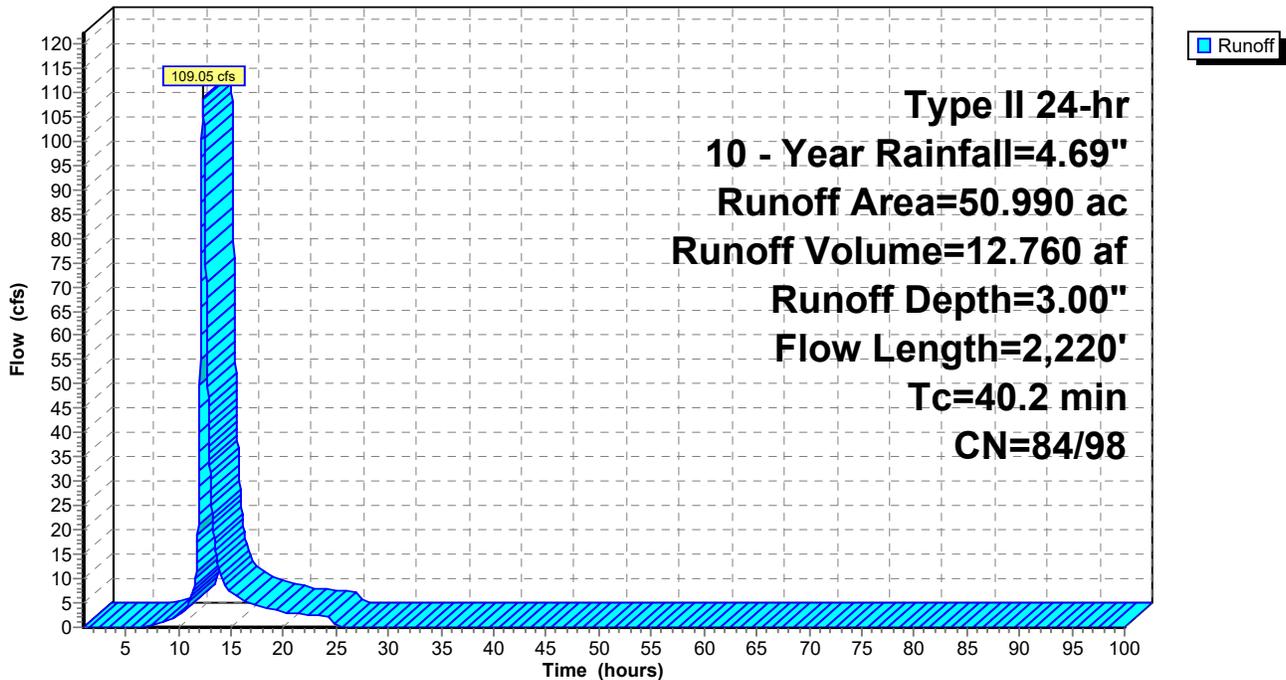
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 10 - Year Rainfall=4.69"

Area (ac)	CN	Description
4.290	77	2 acre lots, 12% imp, HSG C
46.700	85	Row crops, straight row, Good, HSG C
50.990	84	Weighted Average
50.475	84	98.99% Pervious Area
0.515	98	1.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	200	0.0150	0.20		Sheet Flow, SHEET n= 0.120 P2= 3.00"
23.7	2,020	0.0250	1.42		Shallow Concentrated Flow, SHALLOW Cultivated Straight Rows Kv= 9.0 fps
40.2	2,220	Total			

Subcatchment A: EXISTING BASIN A

Hydrograph



Summary for Subcatchment B: EXISTING BASIN B

Runoff = 22.40 cfs @ 12.21 hrs, Volume= 2.064 af, Depth= 3.08"
 Routed to Pond TE : TOTAL EXISTING

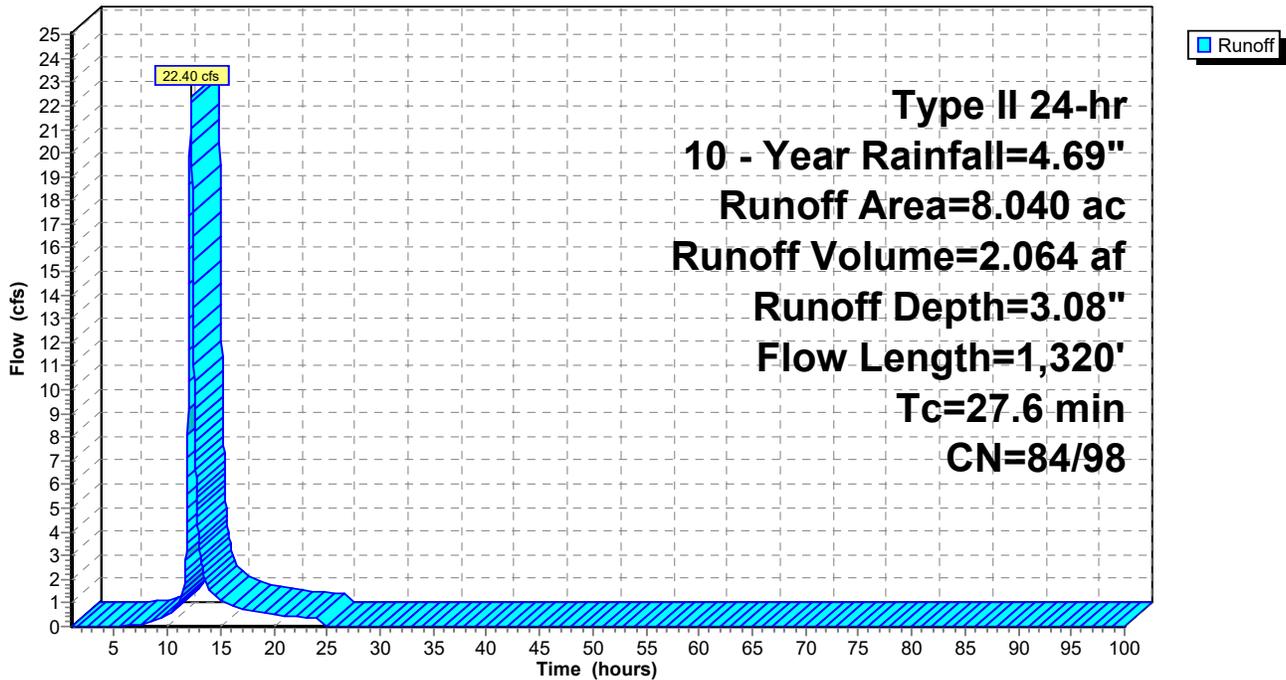
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 10 - Year Rainfall=4.69"

Area (ac)	CN	Description
0.505	98	Paved parking, HSG C
0.365	74	>75% Grass cover, Good, HSG C
7.170	85	Row crops, straight row, Good, HSG C
8.040	85	Weighted Average
7.535	84	93.72% Pervious Area
0.505	98	6.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	200	0.0150	0.20		Sheet Flow, SHEET n= 0.120 P2= 3.00"
11.1	1,120	0.0350	1.68		Shallow Concentrated Flow, SHALLOW Cultivated Straight Rows Kv= 9.0 fps
27.6	1,320	Total			

Subcatchment B: EXISTING BASIN B

Hydrograph



Summary for Pond TE: TOTAL EXISTING

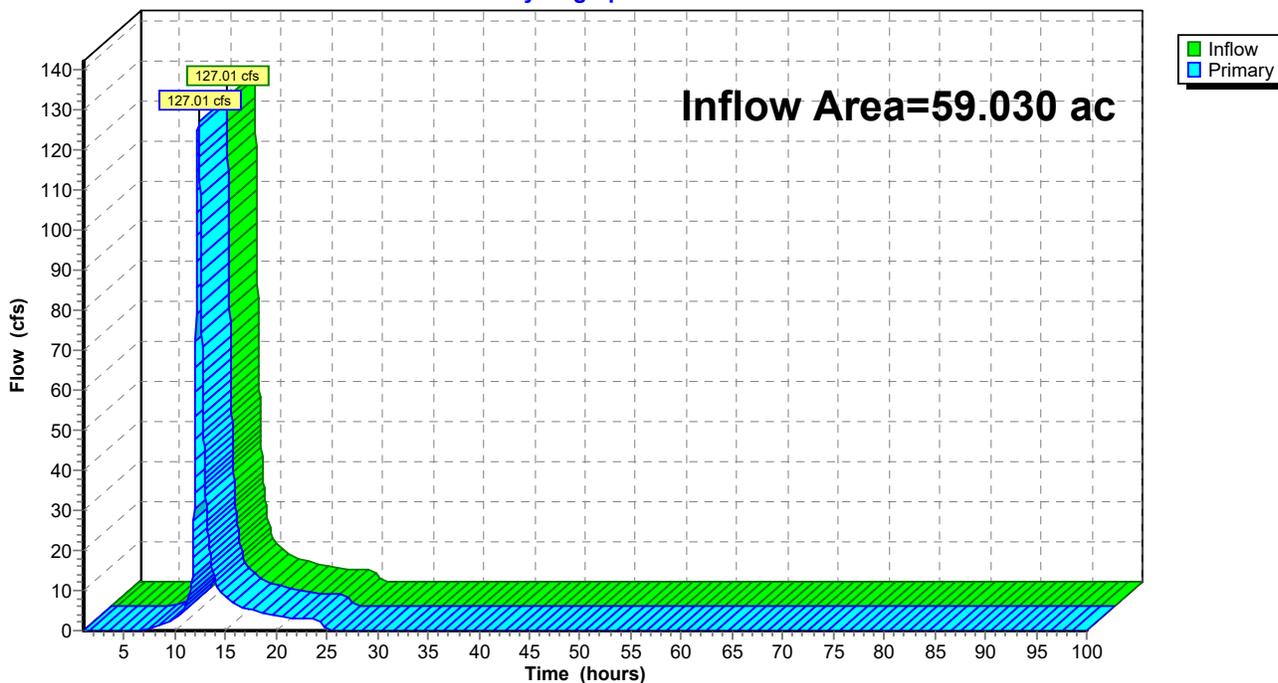
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 59.030 ac, 1.73% Impervious, Inflow Depth = 3.01" for 10 - Year event
Inflow = 127.01 cfs @ 12.33 hrs, Volume= 14.824 af
Primary = 127.01 cfs @ 12.33 hrs, Volume= 14.824 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond TE: TOTAL EXISTING

Hydrograph



50-YEAR

22-02-17_GNCV_Drainage Report_02104805

Type II 24-hr 50yr Rainfall=6.00"

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Page 18

Time span=1.00-100.00 hrs, dt=0.02 hrs, 4951 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA: EXISTING BASIN A Runoff Area=50.990 ac 1.01% Impervious Runoff Depth=4.21"
Flow Length=2,220' Tc=40.2 min CN=84/98 Runoff=152.22 cfs 17.899 af

SubcatchmentB: EXISTING BASIN B Runoff Area=8.040 ac 6.28% Impervious Runoff Depth=4.29"
Flow Length=1,320' Tc=27.6 min CN=84/98 Runoff=31.03 cfs 2.878 af

Pond TE: TOTALEXISTING

Inflow=177.27 cfs 20.776 af
Primary=177.27 cfs 20.776 af

Total Runoff Area = 59.030 ac Runoff Volume = 20.776 af Average Runoff Depth = 4.22"
98.27% Pervious = 58.010 ac 1.73% Impervious = 1.020 ac

Summary for Subcatchment A: EXISTING BASIN A

Runoff = 152.22 cfs @ 12.36 hrs, Volume= 17.899 af, Depth= 4.21"
 Routed to Pond TE : TOTAL EXISTING

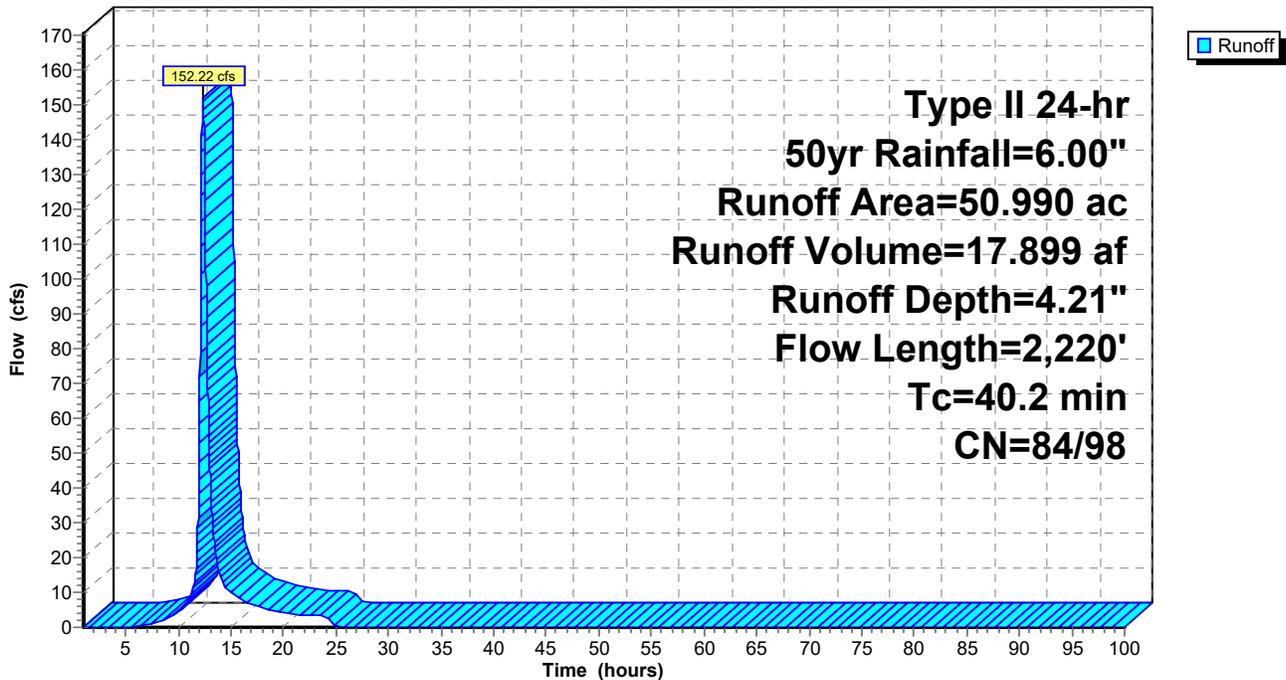
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 50yr Rainfall=6.00"

Area (ac)	CN	Description
4.290	77	2 acre lots, 12% imp, HSG C
46.700	85	Row crops, straight row, Good, HSG C
50.990	84	Weighted Average
50.475	84	98.99% Pervious Area
0.515	98	1.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	200	0.0150	0.20		Sheet Flow, SHEET n= 0.120 P2= 3.00"
23.7	2,020	0.0250	1.42		Shallow Concentrated Flow, SHALLOW Cultivated Straight Rows Kv= 9.0 fps
40.2	2,220	Total			

Subcatchment A: EXISTING BASIN A

Hydrograph



Summary for Subcatchment B: EXISTING BASIN B

Runoff = 31.03 cfs @ 12.21 hrs, Volume= 2.878 af, Depth= 4.29"
 Routed to Pond TE : TOTAL EXISTING

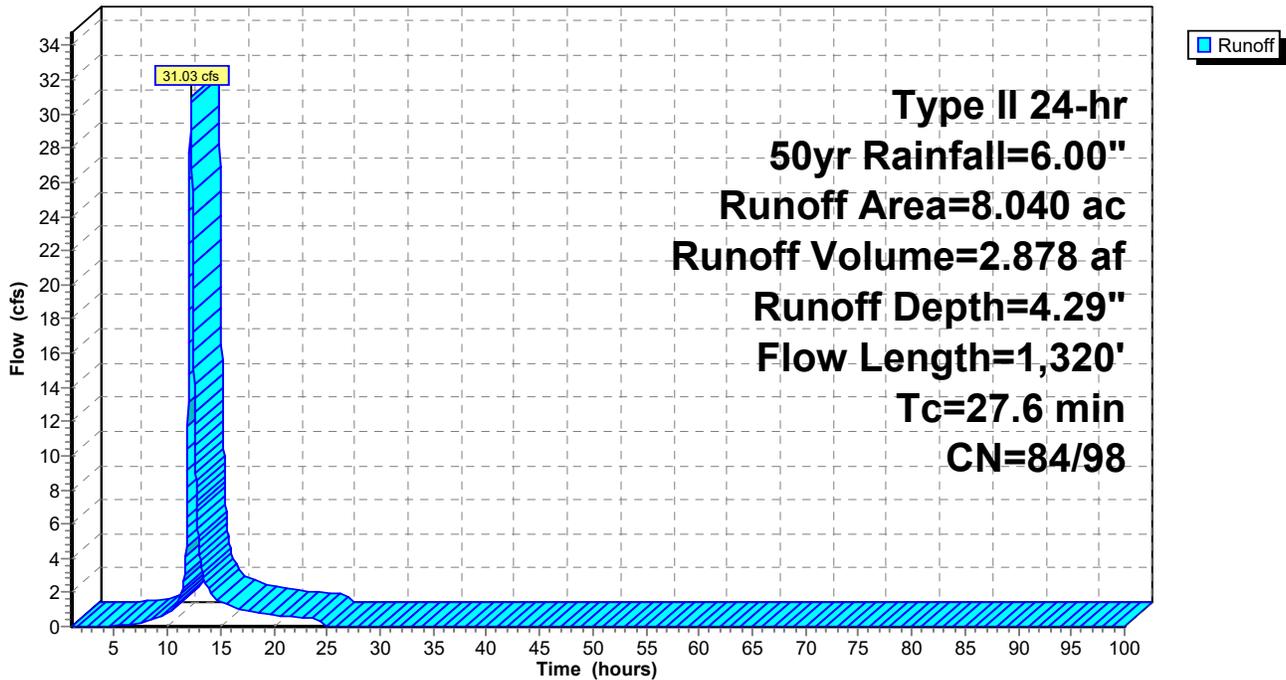
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 50yr Rainfall=6.00"

Area (ac)	CN	Description
0.505	98	Paved parking, HSG C
0.365	74	>75% Grass cover, Good, HSG C
7.170	85	Row crops, straight row, Good, HSG C
8.040	85	Weighted Average
7.535	84	93.72% Pervious Area
0.505	98	6.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	200	0.0150	0.20		Sheet Flow, SHEET n= 0.120 P2= 3.00"
11.1	1,120	0.0350	1.68		Shallow Concentrated Flow, SHALLOW Cultivated Straight Rows Kv= 9.0 fps
27.6	1,320	Total			

Subcatchment B: EXISTING BASIN B

Hydrograph



Summary for Pond TE: TOTAL EXISTING

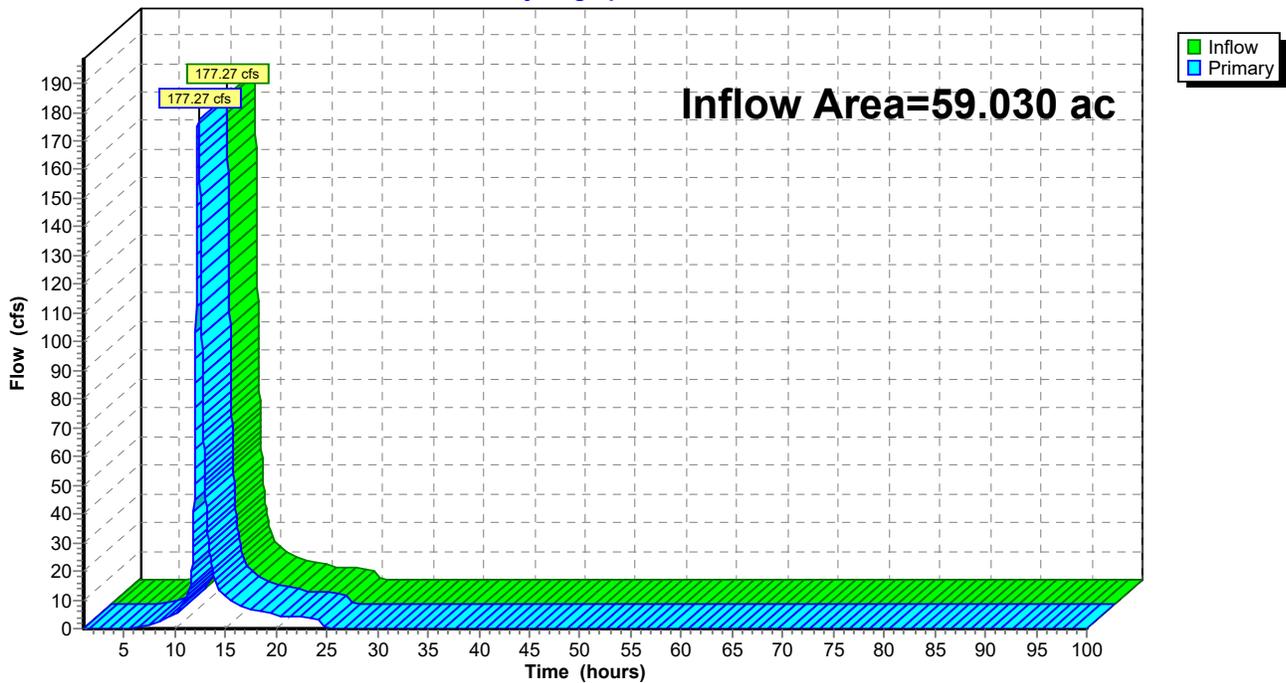
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 59.030 ac, 1.73% Impervious, Inflow Depth = 4.22" for 50yr event
Inflow = 177.27 cfs @ 12.33 hrs, Volume= 20.776 af
Primary = 177.27 cfs @ 12.33 hrs, Volume= 20.776 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond TE: TOTAL EXISTING

Hydrograph



100-YEAR

22-02-17_GNCV_Drainage Report_02104805

Type II 24-hr 100 - Year Rainfall=6.68"

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Page 22

Time span=1.00-100.00 hrs, dt=0.02 hrs, 4951 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA: EXISTING BASIN A Runoff Area=50.990 ac 1.01% Impervious Runoff Depth=4.85"
Flow Length=2,220' Tc=40.2 min CN=84/98 Runoff=174.75 cfs 20.620 af

SubcatchmentB: EXISTING BASIN B Runoff Area=8.040 ac 6.28% Impervious Runoff Depth=4.94"
Flow Length=1,320' Tc=27.6 min CN=84/98 Runoff=35.54 cfs 3.308 af

Pond TE: TOTALEXISTING Inflow=203.50 cfs 23.928 af
Primary=203.50 cfs 23.928 af

Total Runoff Area = 59.030 ac Runoff Volume = 23.928 af Average Runoff Depth = 4.86"
98.27% Pervious = 58.010 ac 1.73% Impervious = 1.020 ac

Summary for Subcatchment A: EXISTING BASIN A

Runoff = 174.75 cfs @ 12.36 hrs, Volume= 20.620 af, Depth= 4.85"
 Routed to Pond TE : TOTAL EXISTING

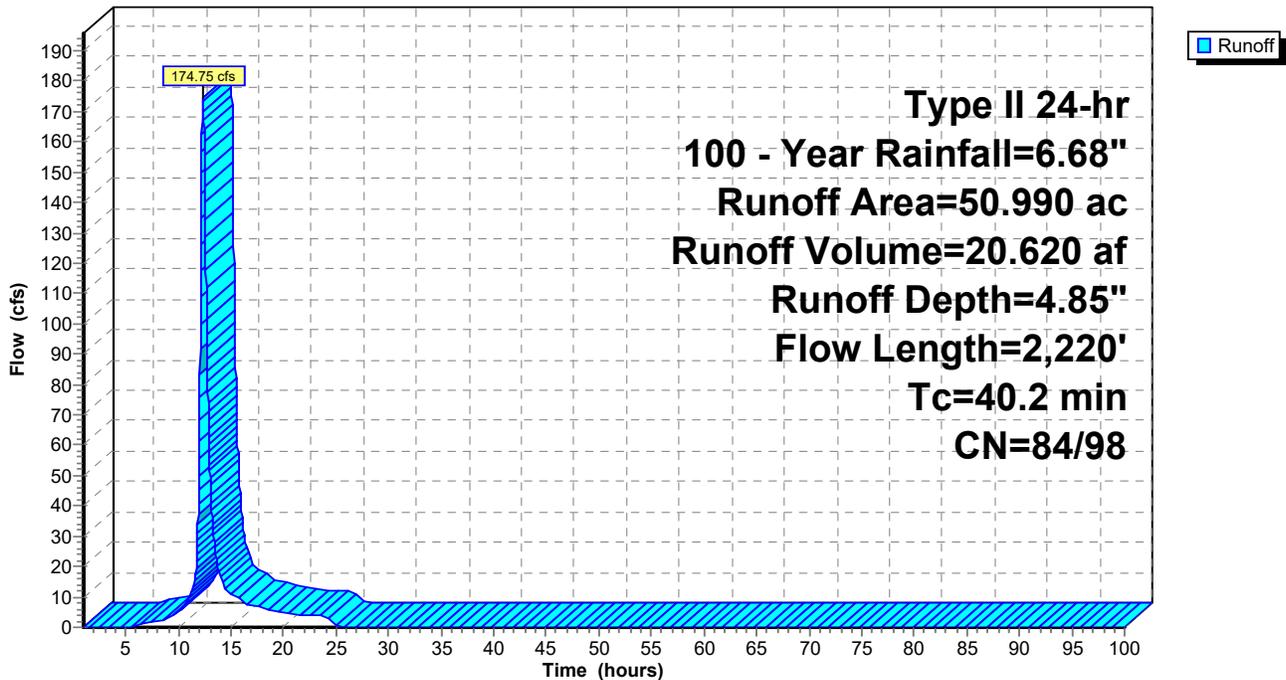
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 100 - Year Rainfall=6.68"

Area (ac)	CN	Description
4.290	77	2 acre lots, 12% imp, HSG C
46.700	85	Row crops, straight row, Good, HSG C
50.990	84	Weighted Average
50.475	84	98.99% Pervious Area
0.515	98	1.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	200	0.0150	0.20		Sheet Flow, SHEET n= 0.120 P2= 3.00"
23.7	2,020	0.0250	1.42		Shallow Concentrated Flow, SHALLOW Cultivated Straight Rows Kv= 9.0 fps
40.2	2,220	Total			

Subcatchment A: EXISTING BASIN A

Hydrograph



Summary for Subcatchment B: EXISTING BASIN B

Runoff = 35.54 cfs @ 12.20 hrs, Volume= 3.308 af, Depth= 4.94"
 Routed to Pond TE : TOTAL EXISTING

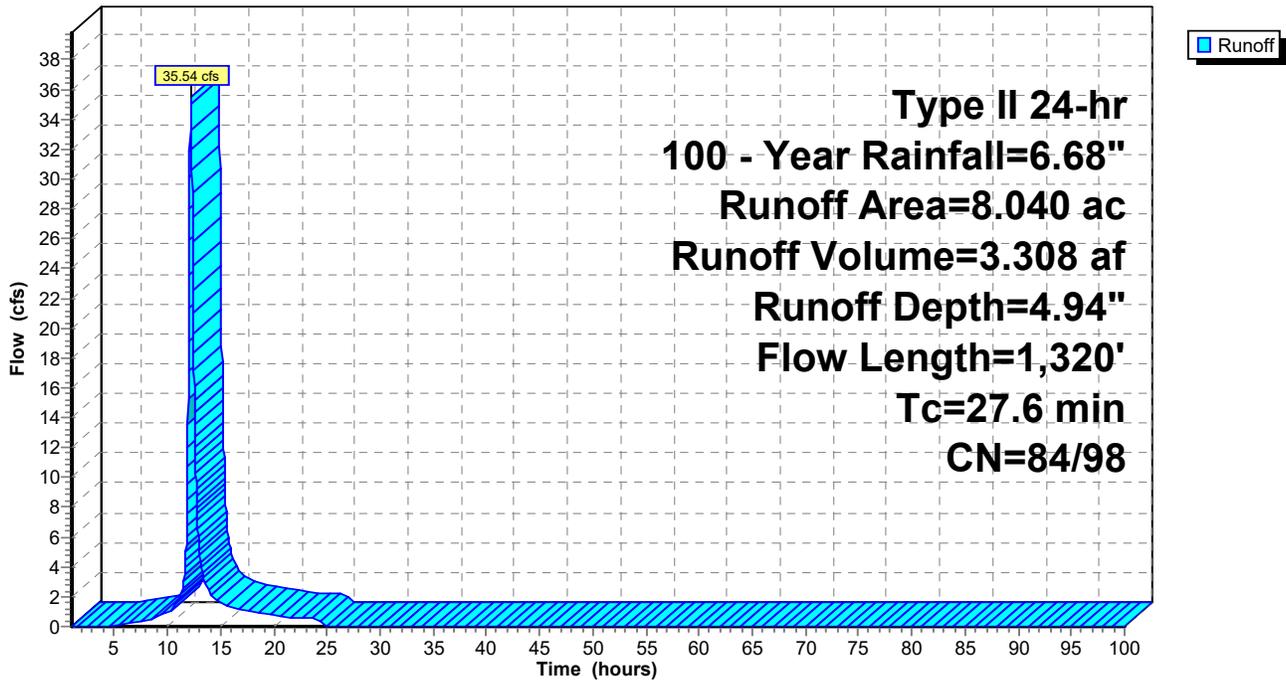
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 100 - Year Rainfall=6.68"

Area (ac)	CN	Description
0.505	98	Paved parking, HSG C
0.365	74	>75% Grass cover, Good, HSG C
7.170	85	Row crops, straight row, Good, HSG C
8.040	85	Weighted Average
7.535	84	93.72% Pervious Area
0.505	98	6.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	200	0.0150	0.20		Sheet Flow, SHEET n= 0.120 P2= 3.00"
11.1	1,120	0.0350	1.68		Shallow Concentrated Flow, SHALLOW Cultivated Straight Rows Kv= 9.0 fps
27.6	1,320	Total			

Subcatchment B: EXISTING BASIN B

Hydrograph



Summary for Pond TE: TOTAL EXISTING

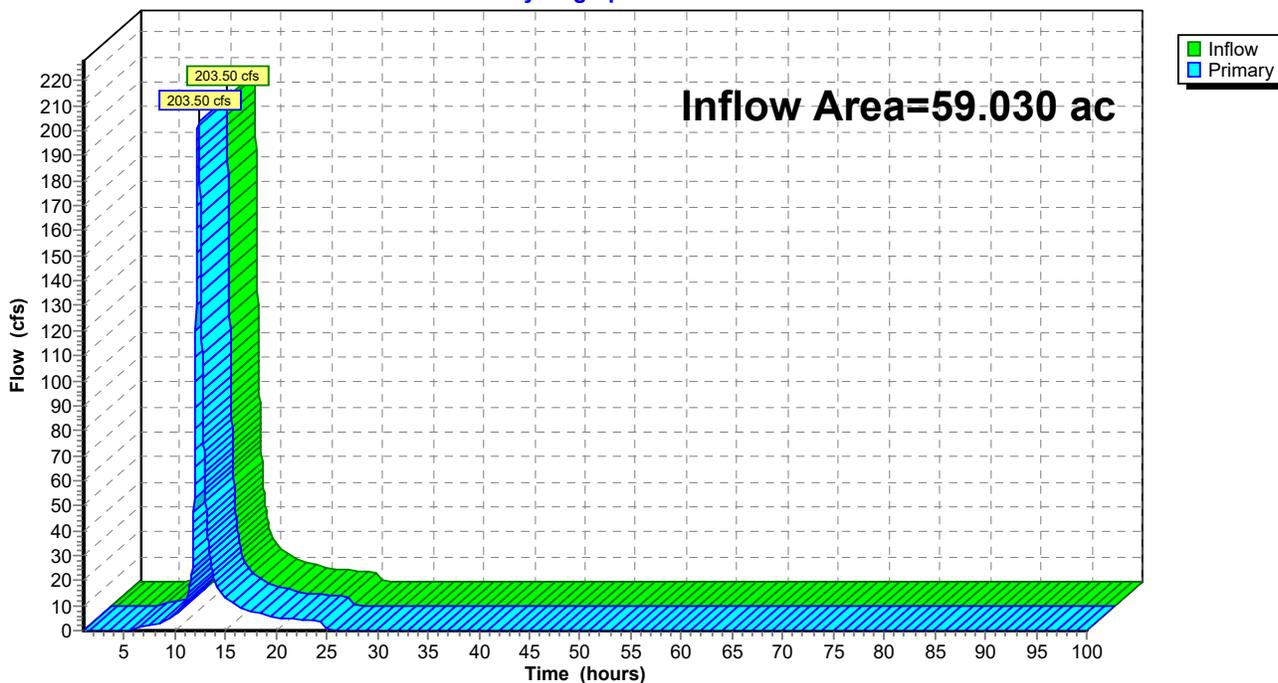
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 59.030 ac, 1.73% Impervious, Inflow Depth = 4.86" for 100 - Year event
Inflow = 203.50 cfs @ 12.33 hrs, Volume= 23.928 af
Primary = 203.50 cfs @ 12.33 hrs, Volume= 23.928 af, Atten= 0%, Lag= 0.0 min

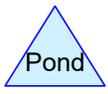
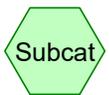
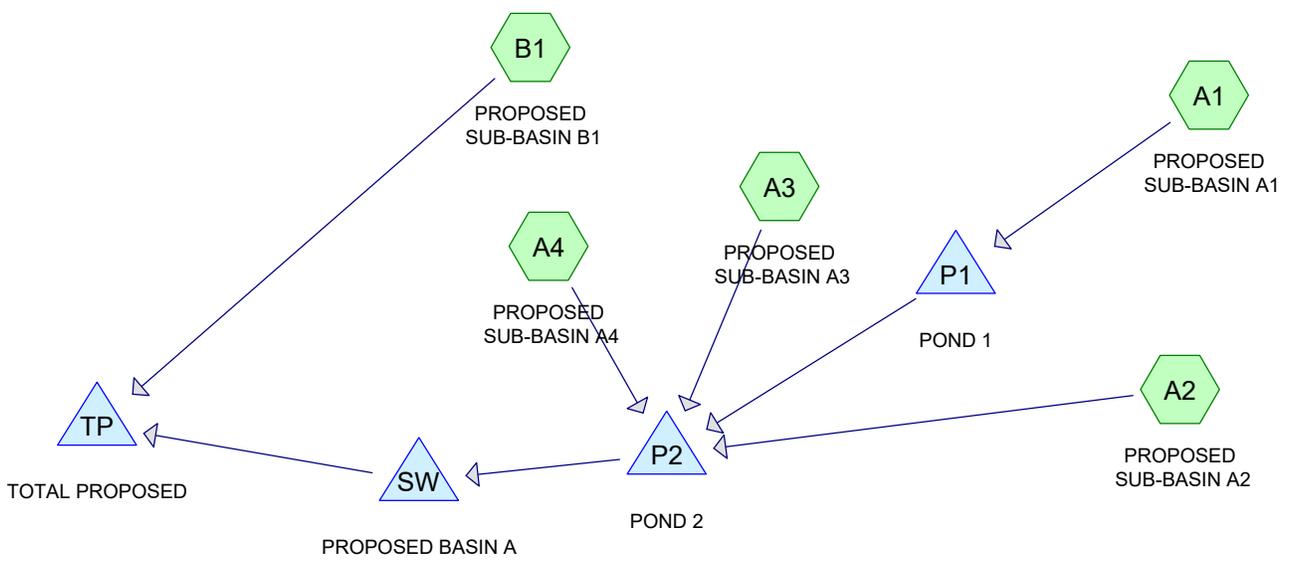
Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond TE: TOTAL EXISTING

Hydrograph



POST-DEVELOPMENT



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Page 2

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2 - Year	Type II 24-hr		Default	24.00	1	3.00	2
2	5 - Year	Type II 24-hr		Default	24.00	1	3.93	2
3	10 - Year	Type II 24-hr		Default	24.00	1	4.69	2
4	50yr	Type II 24-hr		Default	24.00	1	6.00	2
5	100 - Year	Type II 24-hr		Default	24.00	1	6.68	2

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Page 3

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
62.040	87	1/4 acre lots, 38% imp, HSG D (A1, A2, A3, A4, B1)
0.365	74	>75% Grass cover, Good, HSG C (B1)
0.505	98	Paved parking, HSG C (B1)
62.910	87	TOTAL AREA

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Page 4

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.870	HSG C	B1
62.040	HSG D	A1, A2, A3, A4, B1
0.000	Other	
62.910		TOTAL AREA

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Page 5

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	62.040	0.000	62.040	1/4 acre lots, 38% imp	A1, A2, A3, A4, B1
0.000	0.000	0.365	0.000	0.000	0.365	>75% Grass cover, Good	B1
0.000	0.000	0.505	0.000	0.000	0.505	Paved parking	B1
0.000	0.000	0.870	62.040	0.000	62.910	TOTAL AREA	

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Page 6

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	A1	0.00	0.00	560.0	0.0130	0.012	0.0	24.0	0.0
2	A2	0.00	0.00	800.0	0.0450	0.012	0.0	15.0	0.0
3	A3	0.00	0.00	655.0	0.0200	0.012	0.0	24.0	0.0
4	A3	0.00	0.00	200.0	0.0050	0.012	0.0	36.0	0.0
5	B1	0.00	0.00	750.0	0.0050	0.012	0.0	15.0	0.0
6	P1	1,466.00	1,462.00	300.0	0.0133	0.012	0.0	30.0	0.0
7	P2	1,452.50	1,452.00	95.0	0.0053	0.012	0.0	36.0	0.0

2-YEAR

Time span=1.00-100.00 hrs, dt=0.02 hrs, 4951 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA1: PROPOSED Runoff Area=25.320 ac 38.00% Impervious Runoff Depth=1.83"
Flow Length=1,825' Tc=21.7 min CN=80/98 Runoff=45.93 cfs 3.855 af

SubcatchmentA2: PROPOSED Runoff Area=10.600 ac 38.00% Impervious Runoff Depth=1.83"
Flow Length=1,340' Tc=18.3 min CN=80/98 Runoff=21.17 cfs 1.614 af

SubcatchmentA3: PROPOSED Runoff Area=17.760 ac 38.00% Impervious Runoff Depth=1.83"
Flow Length=1,845' Tc=19.3 min CN=80/98 Runoff=34.45 cfs 2.704 af

SubcatchmentA4: PROPOSED SUB-BASIN Runoff Area=2.410 ac 38.00% Impervious Runoff Depth=1.83"
Tc=9.0 min CN=80/98 Runoff=6.48 cfs 0.367 af

SubcatchmentB1: PROPOSED SUB-BASIN Runoff Area=6.820 ac 40.56% Impervious Runoff Depth=1.87"
Flow Length=1,285' Tc=18.9 min CN=80/98 Runoff=13.63 cfs 1.060 af

Pond P1: POND 1 Peak Elev=1,470.33' Storage=44,672 cf Inflow=45.93 cfs 3.855 af
Outflow=21.74 cfs 3.855 af

Pond P2: POND 2 Peak Elev=1,457.02' Storage=38,954 cf Inflow=68.91 cfs 8.539 af
Outflow=46.53 cfs 8.539 af

Pond SW: PROPOSED BASIN A Inflow=46.53 cfs 8.539 af
Primary=46.53 cfs 8.539 af

Pond TP: TOTAL PROPOSED Inflow=55.01 cfs 9.600 af
Primary=55.01 cfs 9.600 af

Total Runoff Area = 62.910 ac Runoff Volume = 9.600 af Average Runoff Depth = 1.83"
61.72% Pervious = 38.830 ac 38.28% Impervious = 24.080 ac

Summary for Subcatchment A1: PROPOSED SUB-BASIN A1

[47] Hint: Peak is 164% of capacity of segment #2

Runoff = 45.93 cfs @ 12.14 hrs, Volume= 3.855 af, Depth= 1.83"
 Routed to Pond P1 : POND 1

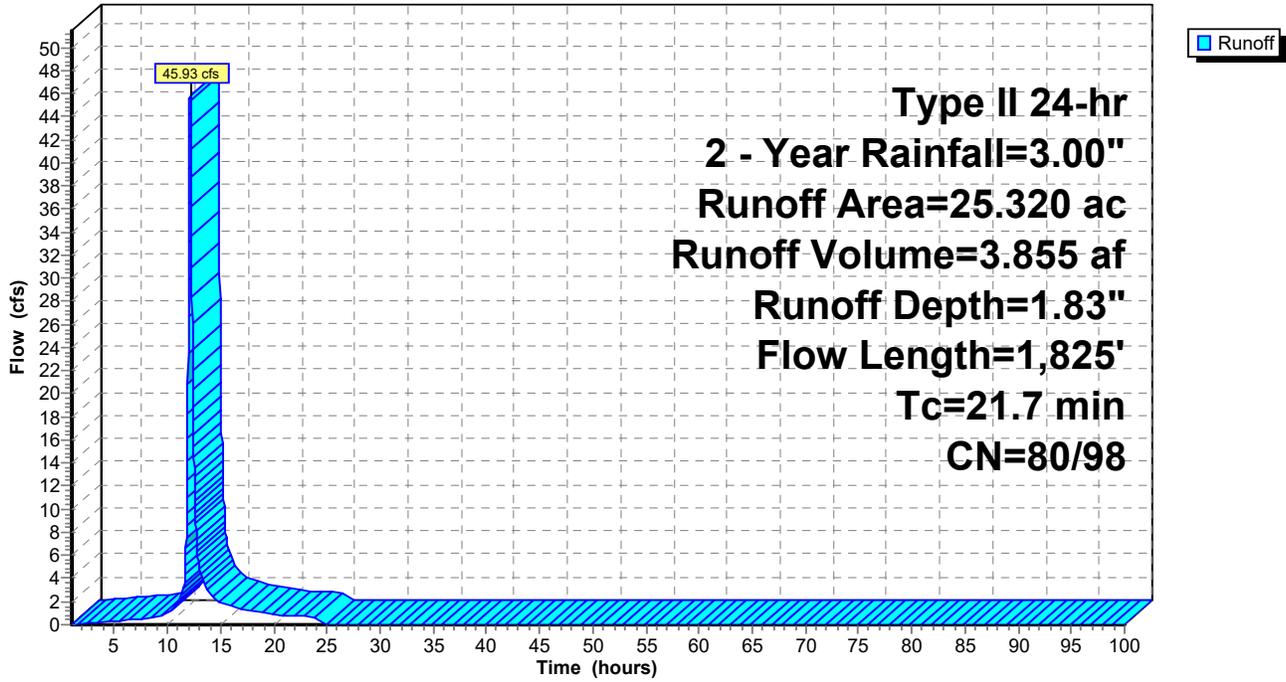
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 2 - Year Rainfall=3.00"

Area (ac)	CN	Description
25.320	87	1/4 acre lots, 38% imp, HSG D
15.698	80	62.00% Pervious Area
9.622	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	150	0.0100	0.14		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
1.0	560	0.0130	8.89	27.94	Pipe Channel, RCP_Round 24" 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
0.9	375	0.0200	6.67	160.11	Trap/Vee/Rect Channel Flow, CHANNEL Bot.W=4.00' D=2.00' Z= 4.0 '/' Top.W=20.00' n= 0.035 Earth, dense weeds
1.0	610	0.0400	10.26	821.11	Trap/Vee/Rect Channel Flow, Bot.W=20.00' D=2.00' Z= 10.0 '/' Top.W=60.00' n= 0.035 Earth, dense weeds
0.3	130	0.0100	6.51	429.85	Trap/Vee/Rect Channel Flow, Bot.W=10.00' D=3.00' Z= 4.0 '/' Top.W=34.00' n= 0.035 Earth, dense weeds
21.7	1,825	Total			

Subcatchment A1: PROPOSED SUB-BASIN A1

Hydrograph



Summary for Subcatchment A2: PROPOSED SUB-BASIN A2

[47] Hint: Peak is 143% of capacity of segment #3

Runoff = 21.17 cfs @ 12.10 hrs, Volume= 1.614 af, Depth= 1.83"
 Routed to Pond P2 : POND 2

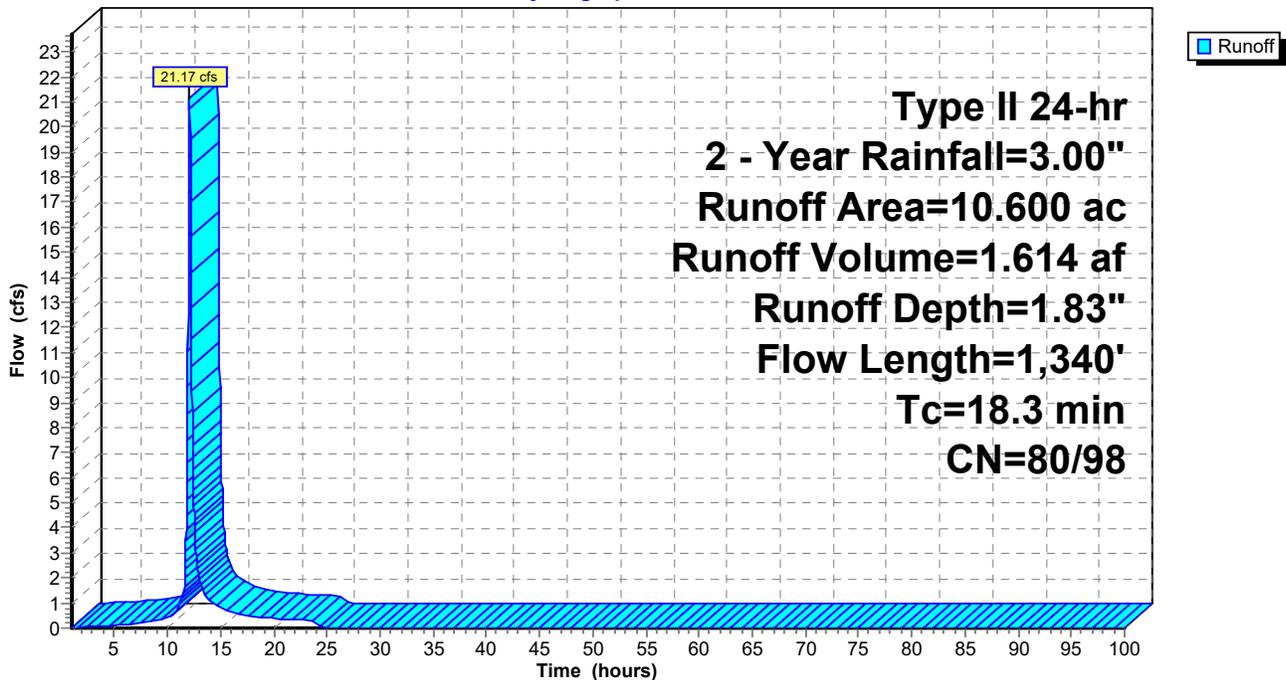
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 2 - Year Rainfall=3.00"

Area (ac)	CN	Description
10.600	87	1/4 acre lots, 38% imp, HSG D
6.572	80	62.00% Pervious Area
4.028	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
3.2	390	0.0100	2.03		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
1.1	800	0.0450	12.10	14.85	Pipe Channel, RCP_Round 15" 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
18.3	1,340	Total			

Subcatchment A2: PROPOSED SUB-BASIN A2

Hydrograph



Summary for Subcatchment A3: PROPOSED SUB-BASIN A3

Runoff = 34.45 cfs @ 12.12 hrs, Volume= 2.704 af, Depth= 1.83"
 Routed to Pond P2 : POND 2

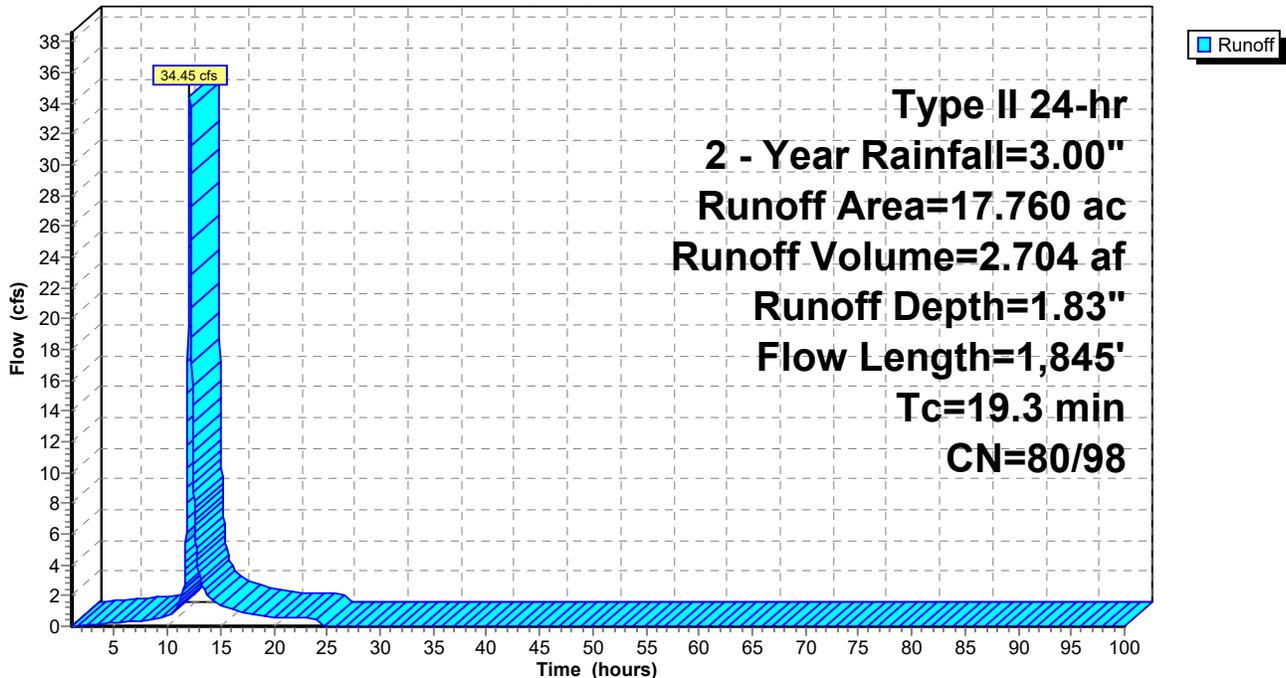
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 2 - Year Rainfall=3.00"

Area (ac)	CN	Description
17.760	87	1/4 acre lots, 38% imp, HSG D
11.011	80	62.00% Pervious Area
6.749	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
3.8	840	0.0325	3.66		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
1.0	655	0.0200	11.03	34.66	Pipe Channel, RCP_Round 24" 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
0.5	200	0.0050	7.23	51.09	Pipe Channel, RCP_Round 36" 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012 Concrete pipe, finished
19.3	1,845	Total			

Subcatchment A3: PROPOSED SUB-BASIN A3

Hydrograph



Summary for Subcatchment A4: PROPOSED SUB-BASIN A4

Runoff = 6.48 cfs @ 12.00 hrs, Volume= 0.367 af, Depth= 1.83"
 Routed to Pond P2 : POND 2

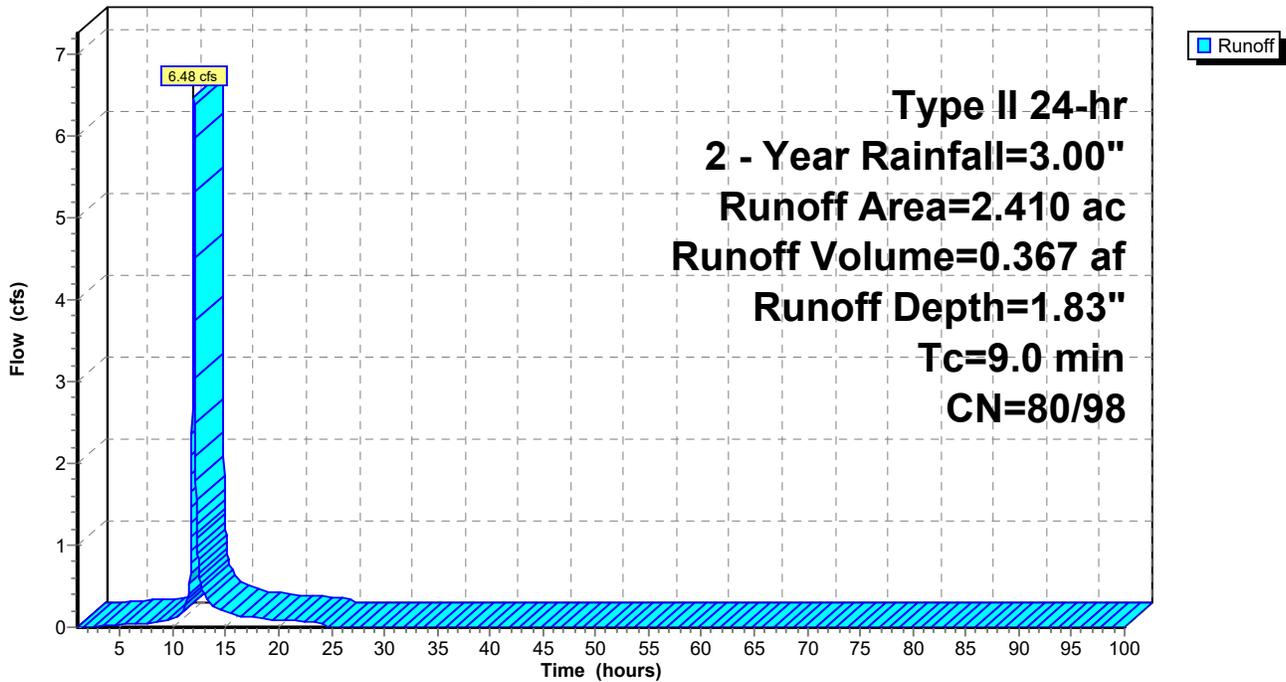
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 2 - Year Rainfall=3.00"

Area (ac)	CN	Description
2.410	87	1/4 acre lots, 38% imp, HSG D
1.494	80	62.00% Pervious Area
0.916	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0					Direct Entry, direct

Subcatchment A4: PROPOSED SUB-BASIN A4

Hydrograph



Summary for Subcatchment B1: PROPOSED SUB-BASIN B1

[47] Hint: Peak is 275% of capacity of segment #3

Runoff = 13.63 cfs @ 12.11 hrs, Volume= 1.060 af, Depth= 1.87"
 Routed to Pond TP : TOTAL PROPOSED

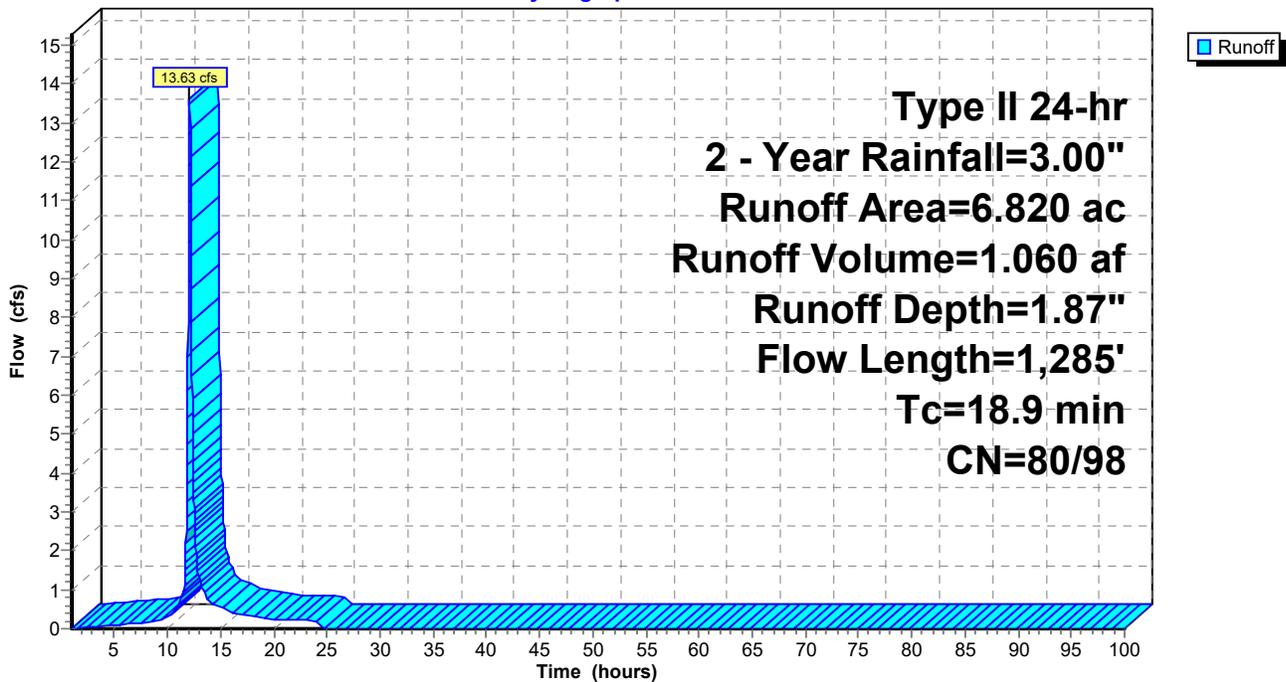
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 2 - Year Rainfall=3.00"

Area (ac)	CN	Description
0.505	98	Paved parking, HSG C
0.365	74	>75% Grass cover, Good, HSG C
5.950	87	1/4 acre lots, 38% imp, HSG D
6.820	87	Weighted Average
4.054	80	59.44% Pervious Area
2.766	98	40.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
1.8	385	0.0325	3.66		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
3.1	750	0.0050	4.03	4.95	Pipe Channel, RCP_Round 15" 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
18.9	1,285	Total			

Subcatchment B1: PROPOSED SUB-BASIN B1

Hydrograph



Summary for Pond P1: POND 1

Inflow Area = 25.320 ac, 38.00% Impervious, Inflow Depth = 1.83" for 2 - Year event
 Inflow = 45.93 cfs @ 12.14 hrs, Volume= 3.855 af
 Outflow = 21.74 cfs @ 12.38 hrs, Volume= 3.855 af, Atten= 53%, Lag= 14.5 min
 Primary = 21.74 cfs @ 12.38 hrs, Volume= 3.855 af
 Routed to Pond P2 : POND 2

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Peak Elev= 1,470.33' @ 12.38 hrs Surf.Area= 24,154 sf Storage= 44,672 cf

Plug-Flow detention time= 26.6 min calculated for 3.854 af (100% of inflow)
 Center-of-Mass det. time= 26.6 min (832.8 - 806.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,466.00'	223,730 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,466.00	47	0	0
1,467.00	1,629	838	838
1,468.00	8,552	5,091	5,929
1,469.00	15,452	12,002	17,931
1,470.00	22,468	18,960	36,891
1,471.00	27,518	24,993	61,884
1,472.00	32,708	30,113	91,997
1,473.00	38,157	35,433	127,429
1,474.00	44,645	41,401	168,830
1,475.00	65,155	54,900	223,730

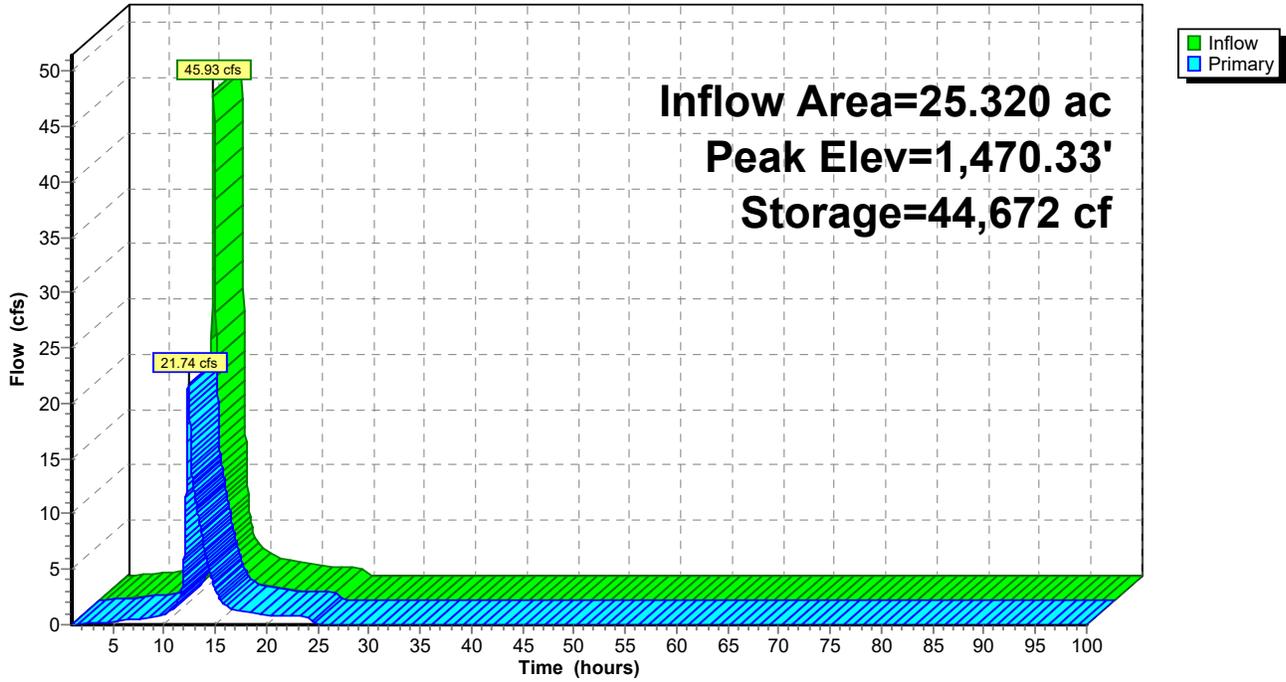
Device	Routing	Invert	Outlet Devices
#1	Primary	1,466.00'	30.0" Round RCP_Round 30" L= 300.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,466.00' / 1,462.00' S= 0.0133 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf
#2	Primary	1,474.10'	30.0' long + 4.0 ' SideZ x 60.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	1,470.00'	36.0" x 36.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	1,466.00'	6.0" W x 48.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=21.72 cfs @ 12.38 hrs HW=1,470.33' TW=1,457.01' (Dynamic Tailwater)

- 1=RCP_Round 30" (Passes 21.72 cfs of 41.50 cfs potential flow)
- 3=Orifice/Grate (Weir Controls 7.55 cfs @ 1.89 fps)
- 4=Orifice/Grate (Orifice Controls 14.17 cfs @ 7.08 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P1: POND 1

Hydrograph



Summary for Pond P2: POND 2

[44] Hint: Outlet device #4 is below defined storage

Inflow Area = 56.090 ac, 38.00% Impervious, Inflow Depth = 1.83" for 2 - Year event
 Inflow = 68.91 cfs @ 12.11 hrs, Volume= 8.539 af
 Outflow = 46.53 cfs @ 12.34 hrs, Volume= 8.539 af, Atten= 32%, Lag= 13.7 min
 Primary = 46.53 cfs @ 12.34 hrs, Volume= 8.539 af
 Routed to Pond SW : PROPOSED BASIN A

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Peak Elev= 1,457.02' @ 12.34 hrs Surf.Area= 20,614 sf Storage= 38,954 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 6.8 min (823.2 - 816.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,453.00'	255,649 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,453.00	626	0	0
1,454.00	4,028	2,327	2,327
1,455.00	9,182	6,605	8,932
1,456.00	14,691	11,937	20,869
1,457.00	20,468	17,580	38,448
1,458.00	26,393	23,431	61,879
1,459.00	32,062	29,228	91,106
1,460.00	36,645	34,354	125,460
1,461.00	41,061	38,853	164,313
1,462.00	45,630	43,346	207,658
1,463.00	50,351	47,991	255,649

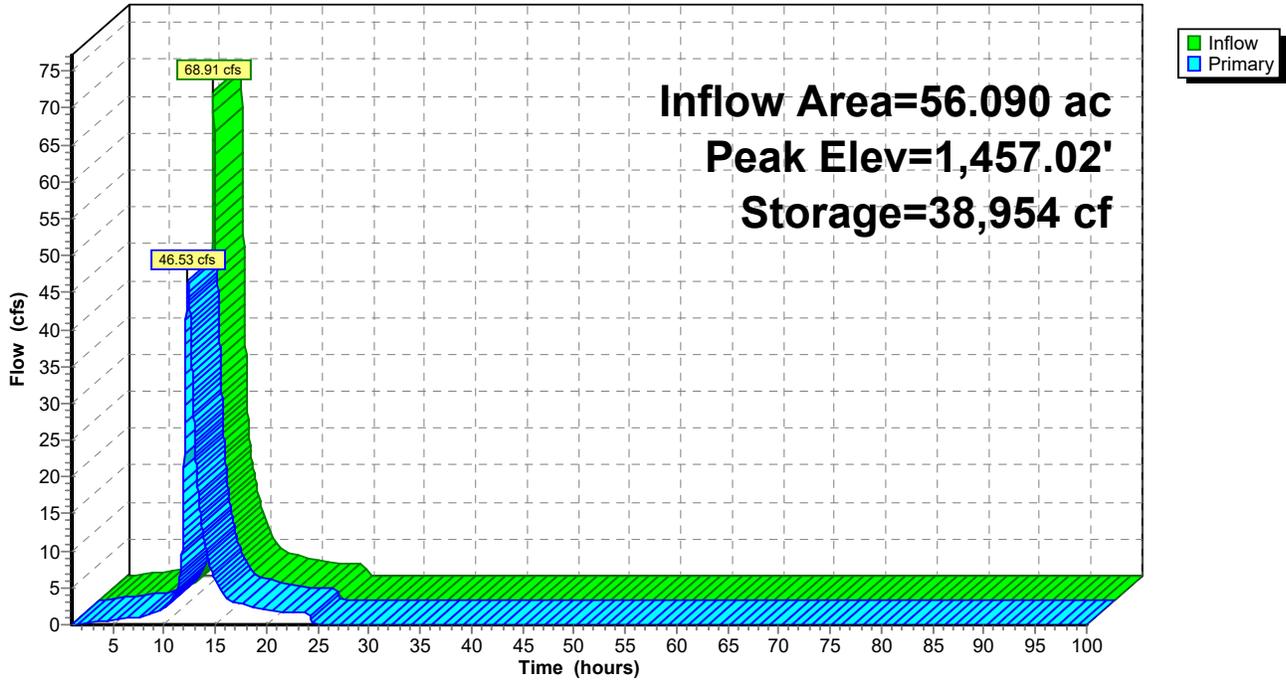
Device	Routing	Invert	Outlet Devices
#1	Primary	1,452.50'	36.0" Round RCP_Round 36" L= 95.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,452.50' / 1,452.00' S= 0.0053 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Primary	1,462.50'	35.0' long + 3.0 ' SideZ x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	1,457.00'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	1,452.50'	18.0" W x 54.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=46.52 cfs @ 12.34 hrs HW=1,457.02' TW=0.00' (Dynamic Tailwater)

- 1=RCP_Round 36" (Passes 46.52 cfs of 55.86 cfs potential flow)
- 3=Orifice/Grate (Weir Controls 0.20 cfs @ 0.51 fps)
- 4=Orifice/Grate (Orifice Controls 46.32 cfs @ 6.86 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P2: POND 2

Hydrograph



Summary for Pond SW: PROPOSED BASIN A

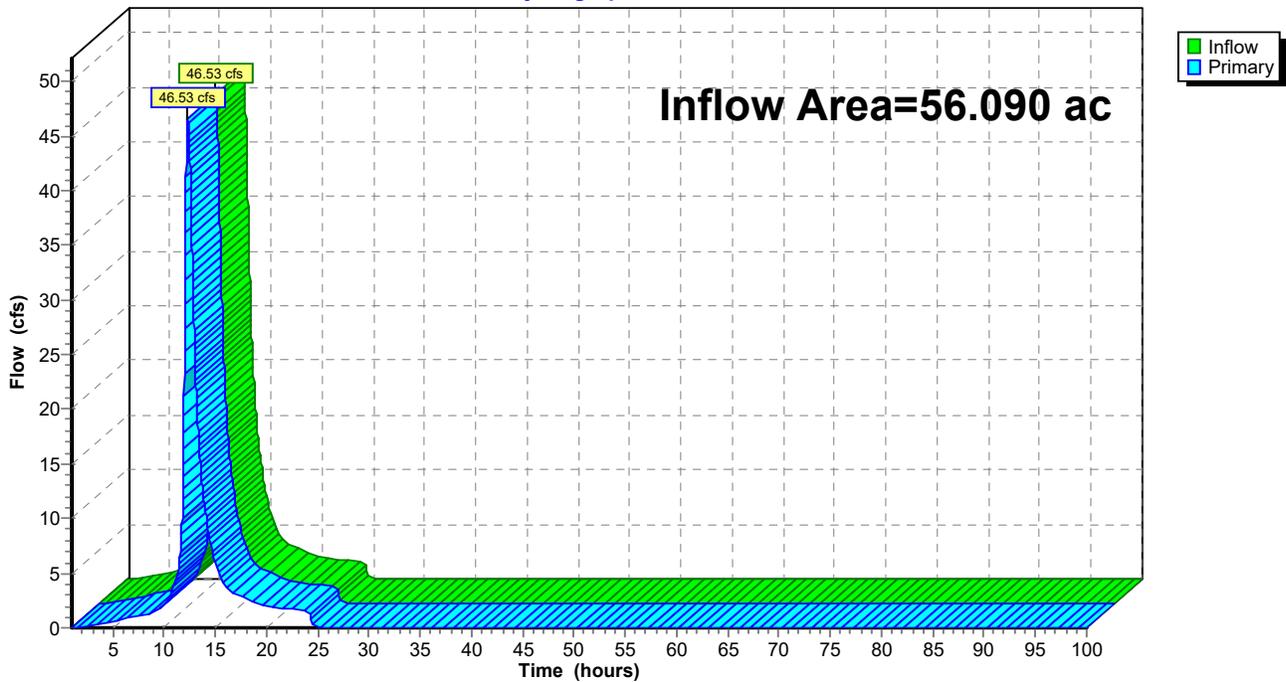
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 56.090 ac, 38.00% Impervious, Inflow Depth = 1.83" for 2 - Year event
Inflow = 46.53 cfs @ 12.34 hrs, Volume= 8.539 af
Primary = 46.53 cfs @ 12.34 hrs, Volume= 8.539 af, Atten= 0%, Lag= 0.0 min
Routed to Pond TP : TOTAL PROPOSED

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond SW: PROPOSED BASIN A

Hydrograph



Summary for Pond TP: TOTAL PROPOSED

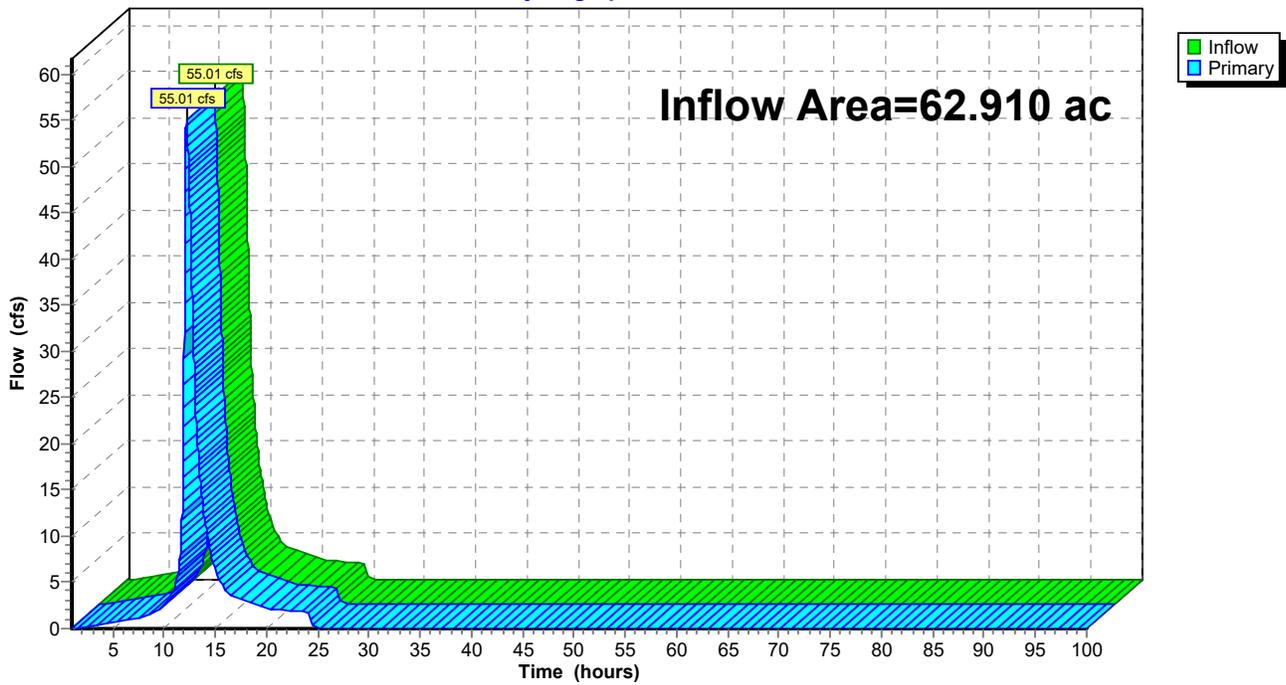
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.910 ac, 38.28% Impervious, Inflow Depth = 1.83" for 2 - Year event
Inflow = 55.01 cfs @ 12.21 hrs, Volume= 9.600 af
Primary = 55.01 cfs @ 12.21 hrs, Volume= 9.600 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond TP: TOTAL PROPOSED

Hydrograph



5-YEAR

22-02-17_GNCV_Drainage Report_02104805*Type II 24-hr 5 - Year Rainfall=3.93"*

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Page 21

Time span=1.00-100.00 hrs, dt=0.02 hrs, 4951 points
 Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA1: PROPOSED Runoff Area=25.320 ac 38.00% Impervious Runoff Depth=2.63"
 Flow Length=1,825' Tc=21.7 min CN=80/98 Runoff=66.60 cfs 5.558 af

SubcatchmentA2: PROPOSED Runoff Area=10.600 ac 38.00% Impervious Runoff Depth=2.63"
 Flow Length=1,340' Tc=18.3 min CN=80/98 Runoff=30.66 cfs 2.327 af

SubcatchmentA3: PROPOSED Runoff Area=17.760 ac 38.00% Impervious Runoff Depth=2.63"
 Flow Length=1,845' Tc=19.3 min CN=80/98 Runoff=49.92 cfs 3.899 af

SubcatchmentA4: PROPOSED SUB-BASIN Runoff Area=2.410 ac 38.00% Impervious Runoff Depth=2.63"
 Tc=9.0 min CN=80/98 Runoff=9.36 cfs 0.529 af

SubcatchmentB1: PROPOSED SUB-BASIN Runoff Area=6.820 ac 40.56% Impervious Runoff Depth=2.68"
 Flow Length=1,285' Tc=18.9 min CN=80/98 Runoff=19.64 cfs 1.522 af

Pond P1: POND 1 Peak Elev=1,470.80' Storage=56,522 cf Inflow=66.60 cfs 5.558 af
 Outflow=43.89 cfs 5.558 af

Pond P2: POND 2 Peak Elev=1,458.27' Storage=69,160 cf Inflow=104.19 cfs 12.313 af
 Outflow=70.31 cfs 12.313 af

Pond SW: PROPOSED BASIN A Inflow=70.31 cfs 12.313 af
 Primary=70.31 cfs 12.313 af

Pond TP: TOTAL PROPOSED Inflow=81.78 cfs 13.835 af
 Primary=81.78 cfs 13.835 af

Total Runoff Area = 62.910 ac Runoff Volume = 13.835 af Average Runoff Depth = 2.64"
61.72% Pervious = 38.830 ac 38.28% Impervious = 24.080 ac

Summary for Subcatchment A1: PROPOSED SUB-BASIN A1

[47] Hint: Peak is 238% of capacity of segment #2

Runoff = 66.60 cfs @ 12.14 hrs, Volume= 5.558 af, Depth= 2.63"
 Routed to Pond P1 : POND 1

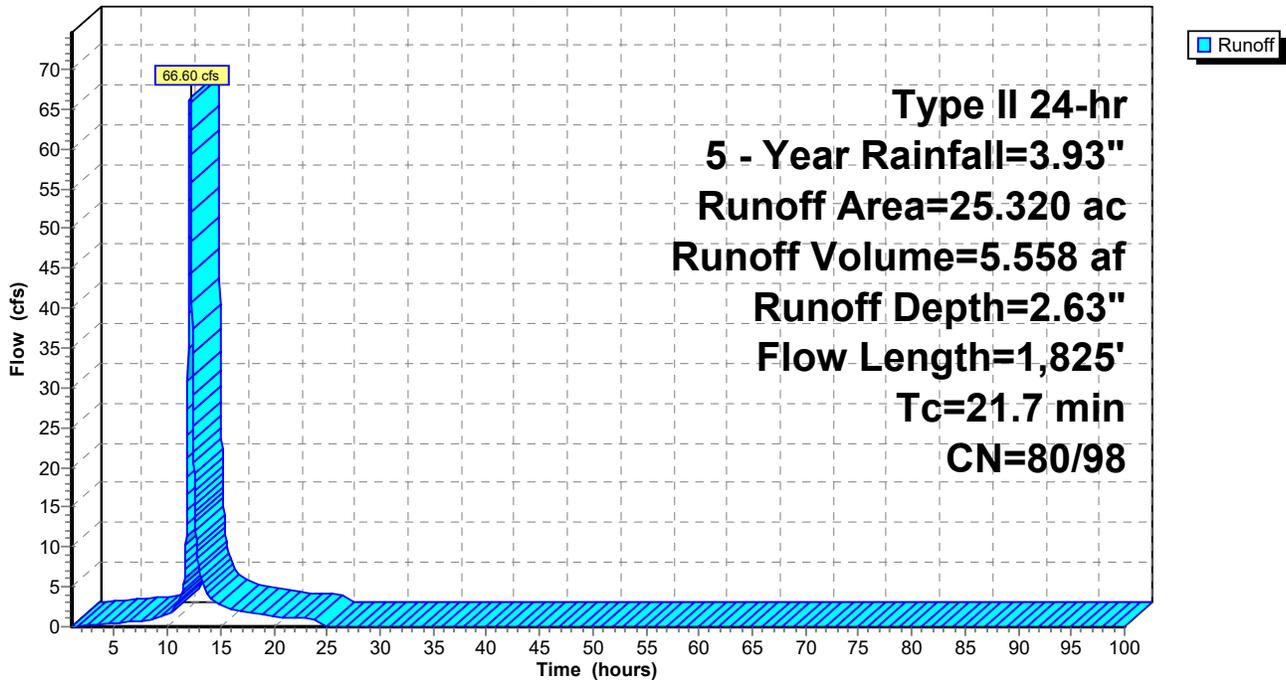
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 5 - Year Rainfall=3.93"

Area (ac)	CN	Description
25.320	87	1/4 acre lots, 38% imp, HSG D
15.698	80	62.00% Pervious Area
9.622	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	150	0.0100	0.14		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
1.0	560	0.0130	8.89	27.94	Pipe Channel, RCP_Round 24" 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
0.9	375	0.0200	6.67	160.11	Trap/Vee/Rect Channel Flow, CHANNEL Bot.W=4.00' D=2.00' Z= 4.0 '/' Top.W=20.00' n= 0.035 Earth, dense weeds
1.0	610	0.0400	10.26	821.11	Trap/Vee/Rect Channel Flow, Bot.W=20.00' D=2.00' Z= 10.0 '/' Top.W=60.00' n= 0.035 Earth, dense weeds
0.3	130	0.0100	6.51	429.85	Trap/Vee/Rect Channel Flow, Bot.W=10.00' D=3.00' Z= 4.0 '/' Top.W=34.00' n= 0.035 Earth, dense weeds
21.7	1,825	Total			

Subcatchment A1: PROPOSED SUB-BASIN A1

Hydrograph



Summary for Subcatchment A2: PROPOSED SUB-BASIN A2

[47] Hint: Peak is 207% of capacity of segment #3

Runoff = 30.66 cfs @ 12.10 hrs, Volume= 2.327 af, Depth= 2.63"
 Routed to Pond P2 : POND 2

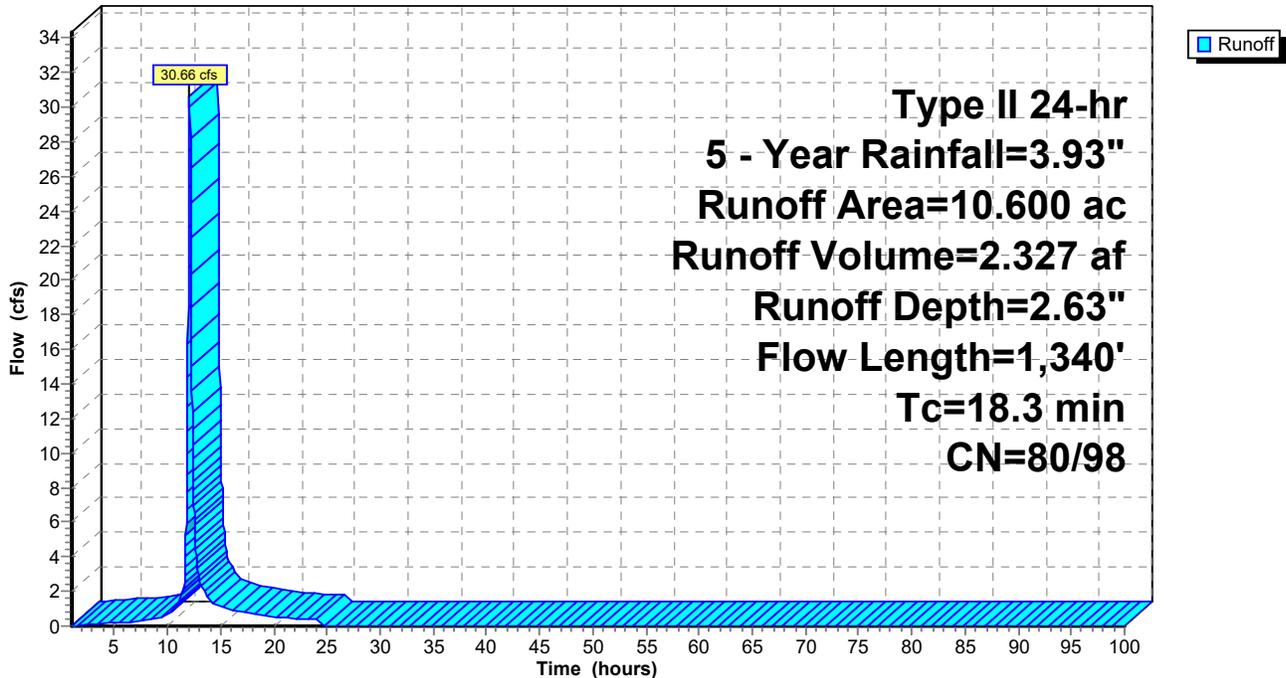
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 5 - Year Rainfall=3.93"

Area (ac)	CN	Description
10.600	87	1/4 acre lots, 38% imp, HSG D
6.572	80	62.00% Pervious Area
4.028	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
3.2	390	0.0100	2.03		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
1.1	800	0.0450	12.10	14.85	Pipe Channel, RCP_Round 15" 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
18.3	1,340	Total			

Subcatchment A2: PROPOSED SUB-BASIN A2

Hydrograph



Summary for Subcatchment A3: PROPOSED SUB-BASIN A3

[47] Hint: Peak is 144% of capacity of segment #3

Runoff = 49.92 cfs @ 12.11 hrs, Volume= 3.899 af, Depth= 2.63"
 Routed to Pond P2 : POND 2

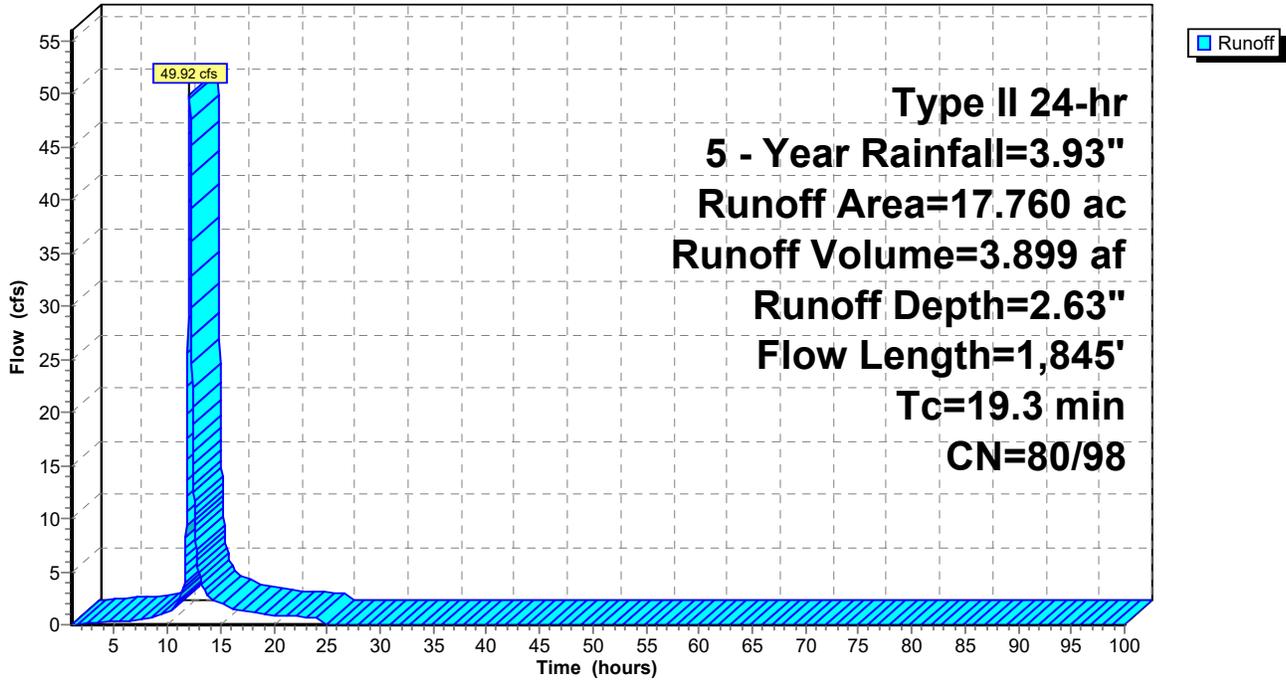
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 5 - Year Rainfall=3.93"

Area (ac)	CN	Description
17.760	87	1/4 acre lots, 38% imp, HSG D
11.011	80	62.00% Pervious Area
6.749	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
3.8	840	0.0325	3.66		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
1.0	655	0.0200	11.03	34.66	Pipe Channel, RCP_Round 24" 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
0.5	200	0.0050	7.23	51.09	Pipe Channel, RCP_Round 36" 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012 Concrete pipe, finished
19.3	1,845	Total			

Subcatchment A3: PROPOSED SUB-BASIN A3

Hydrograph



Summary for Subcatchment A4: PROPOSED SUB-BASIN A4

Runoff = 9.36 cfs @ 12.00 hrs, Volume= 0.529 af, Depth= 2.63"
 Routed to Pond P2 : POND 2

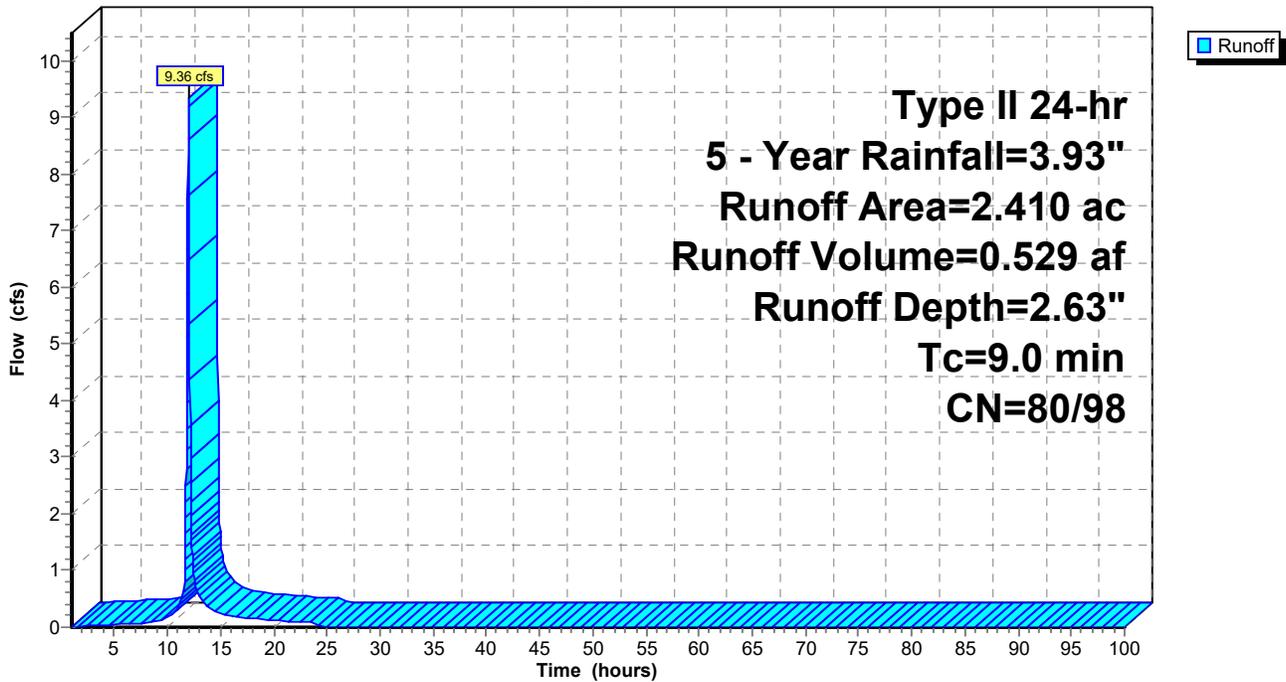
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 5 - Year Rainfall=3.93"

Area (ac)	CN	Description
2.410	87	1/4 acre lots, 38% imp, HSG D
1.494	80	62.00% Pervious Area
0.916	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0					Direct Entry, direct

Subcatchment A4: PROPOSED SUB-BASIN A4

Hydrograph



Summary for Subcatchment B1: PROPOSED SUB-BASIN B1

[47] Hint: Peak is 397% of capacity of segment #3

Runoff = 19.64 cfs @ 12.11 hrs, Volume= 1.522 af, Depth= 2.68"
 Routed to Pond TP : TOTAL PROPOSED

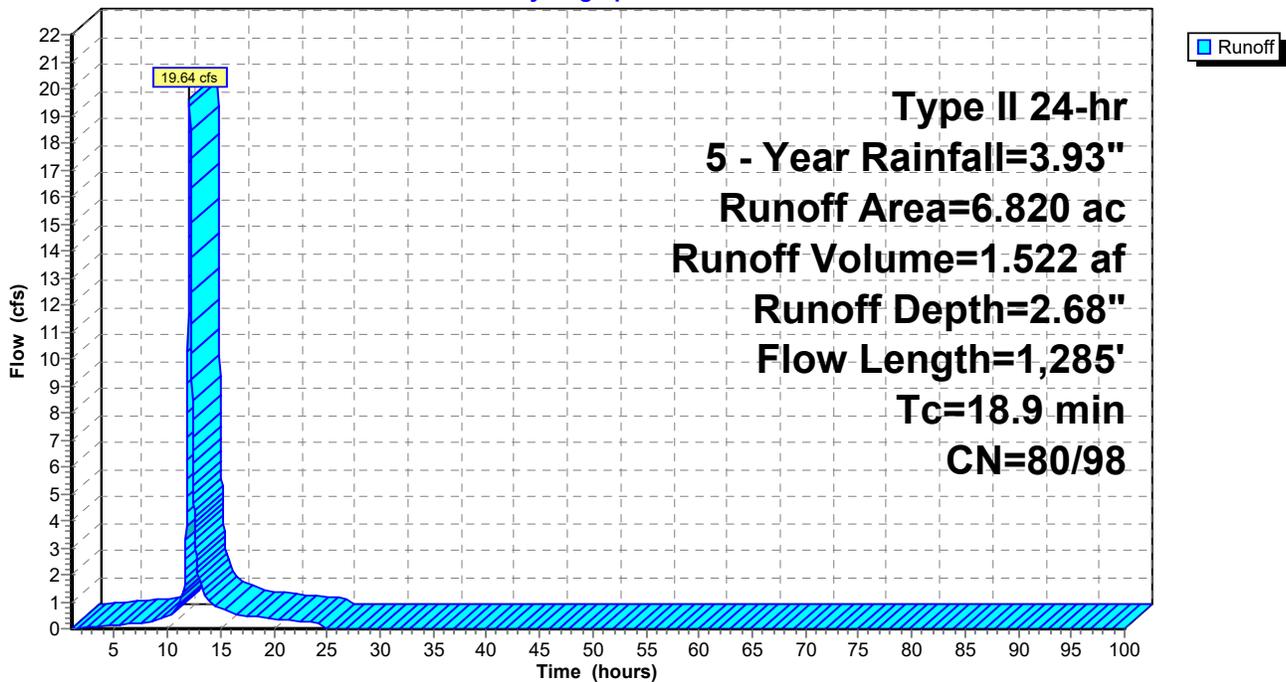
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 5 - Year Rainfall=3.93"

Area (ac)	CN	Description
0.505	98	Paved parking, HSG C
0.365	74	>75% Grass cover, Good, HSG C
5.950	87	1/4 acre lots, 38% imp, HSG D
6.820	87	Weighted Average
4.054	80	59.44% Pervious Area
2.766	98	40.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
1.8	385	0.0325	3.66		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
3.1	750	0.0050	4.03	4.95	Pipe Channel, RCP_Round 15" 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
18.9	1,285	Total			

Subcatchment B1: PROPOSED SUB-BASIN B1

Hydrograph



Summary for Pond P1: POND 1

Inflow Area = 25.320 ac, 38.00% Impervious, Inflow Depth = 2.63" for 5 - Year event
 Inflow = 66.60 cfs @ 12.14 hrs, Volume= 5.558 af
 Outflow = 43.89 cfs @ 12.30 hrs, Volume= 5.558 af, Atten= 34%, Lag= 9.8 min
 Primary = 43.89 cfs @ 12.30 hrs, Volume= 5.558 af
 Routed to Pond P2 : POND 2

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Peak Elev= 1,470.80' @ 12.30 hrs Surf.Area= 26,516 sf Storage= 56,522 cf

Plug-Flow detention time= 24.8 min calculated for 5.557 af (100% of inflow)
 Center-of-Mass det. time= 24.8 min (825.5 - 800.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,466.00'	223,730 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,466.00	47	0	0
1,467.00	1,629	838	838
1,468.00	8,552	5,091	5,929
1,469.00	15,452	12,002	17,931
1,470.00	22,468	18,960	36,891
1,471.00	27,518	24,993	61,884
1,472.00	32,708	30,113	91,997
1,473.00	38,157	35,433	127,429
1,474.00	44,645	41,401	168,830
1,475.00	65,155	54,900	223,730

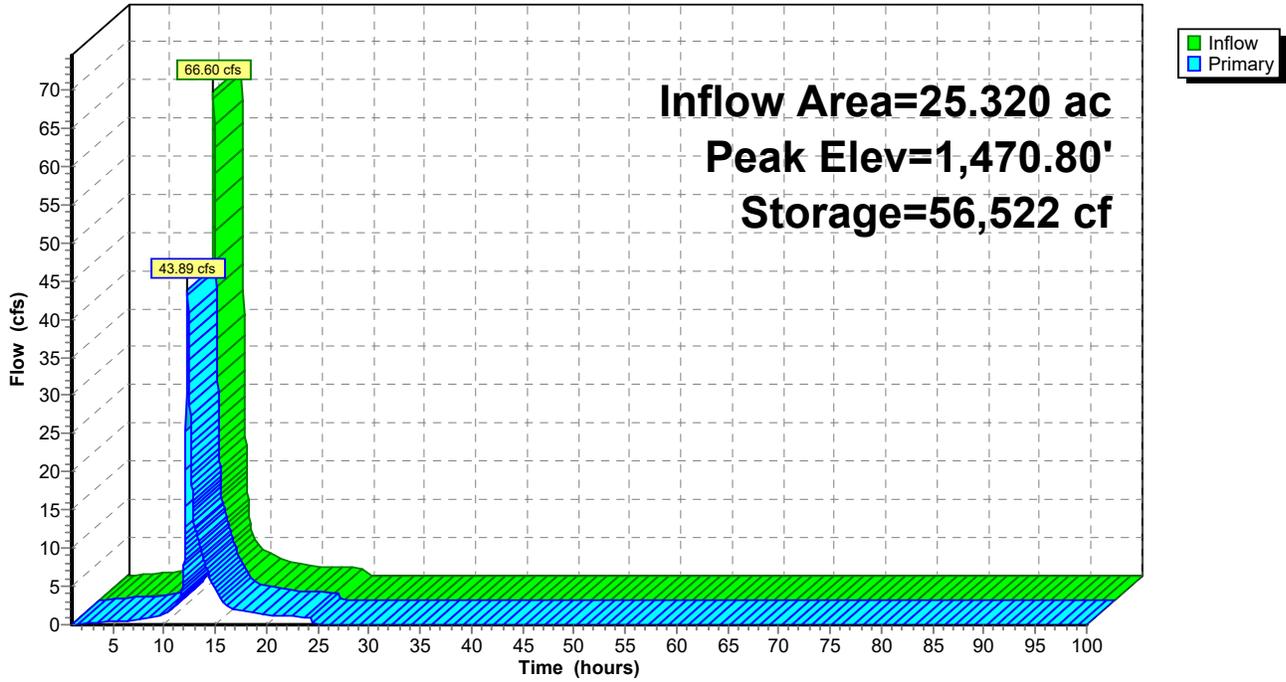
Device	Routing	Invert	Outlet Devices
#1	Primary	1,466.00'	30.0" Round RCP_Round 30" L= 300.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,466.00' / 1,462.00' S= 0.0133 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf
#2	Primary	1,474.10'	30.0' long + 4.0 ' SideZ x 60.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	1,470.00'	36.0" x 36.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	1,466.00'	6.0" W x 48.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=43.85 cfs @ 12.30 hrs HW=1,470.80' TW=1,458.18' (Dynamic Tailwater)

- 1=RCP_Round 30" (Passes 43.85 cfs of 44.54 cfs potential flow)
- 3=Orifice/Grate (Weir Controls 28.11 cfs @ 2.93 fps)
- 4=Orifice/Grate (Orifice Controls 15.73 cfs @ 7.87 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P1: POND 1

Hydrograph



Summary for Pond P2: POND 2

[44] Hint: Outlet device #4 is below defined storage

Inflow Area = 56.090 ac, 38.00% Impervious, Inflow Depth = 2.63" for 5 - Year event
 Inflow = 104.19 cfs @ 12.18 hrs, Volume= 12.313 af
 Outflow = 70.31 cfs @ 12.39 hrs, Volume= 12.313 af, Atten= 33%, Lag= 12.6 min
 Primary = 70.31 cfs @ 12.39 hrs, Volume= 12.313 af
 Routed to Pond SW : PROPOSED BASIN A

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Peak Elev= 1,458.27' @ 12.39 hrs Surf.Area= 27,913 sf Storage= 69,160 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 8.3 min (818.4 - 810.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,453.00'	255,649 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,453.00	626	0	0
1,454.00	4,028	2,327	2,327
1,455.00	9,182	6,605	8,932
1,456.00	14,691	11,937	20,869
1,457.00	20,468	17,580	38,448
1,458.00	26,393	23,431	61,879
1,459.00	32,062	29,228	91,106
1,460.00	36,645	34,354	125,460
1,461.00	41,061	38,853	164,313
1,462.00	45,630	43,346	207,658
1,463.00	50,351	47,991	255,649

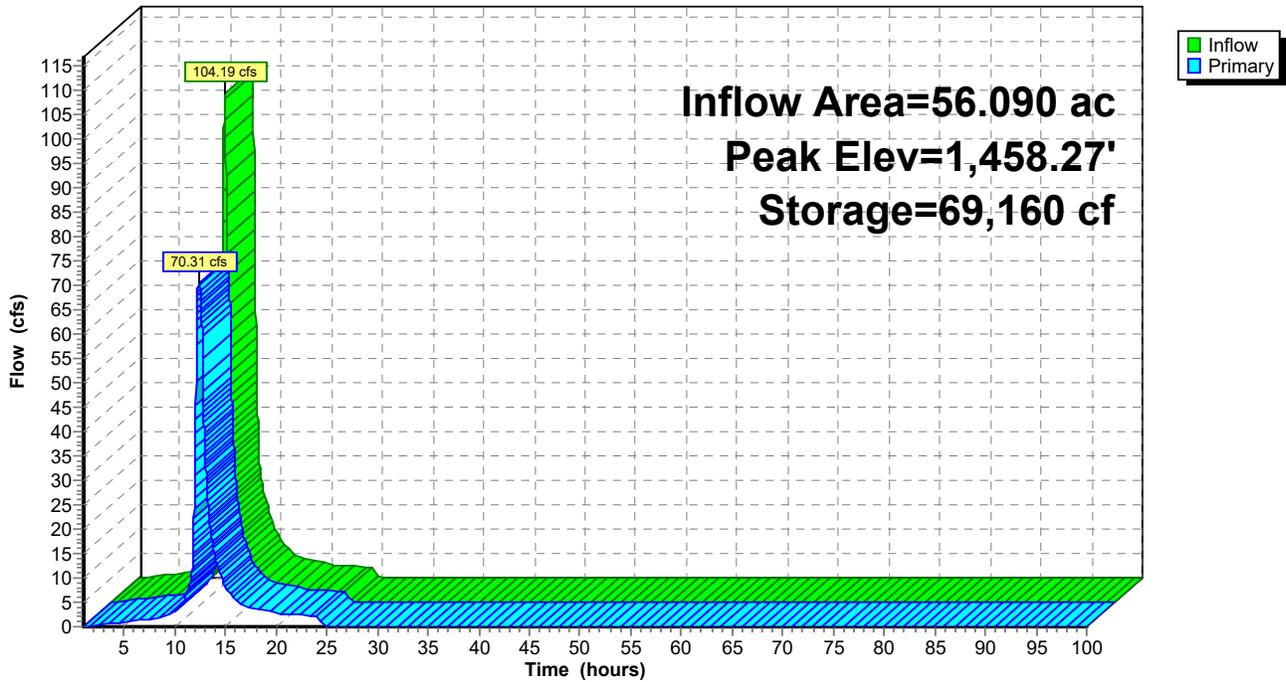
Device	Routing	Invert	Outlet Devices
#1	Primary	1,452.50'	36.0" Round RCP_Round 36" L= 95.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,452.50' / 1,452.00' S= 0.0053 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Primary	1,462.50'	35.0' long + 3.0 ' SideZ x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	1,457.00'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	1,452.50'	18.0" W x 54.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=70.31 cfs @ 12.39 hrs HW=1,458.27' TW=0.00' (Dynamic Tailwater)

- 1=RCP_Round 36" (Inlet Controls 70.31 cfs @ 9.95 fps)
- 3=Orifice/Grate (Passes < 74.63 cfs potential flow)
- 4=Orifice/Grate (Passes < 59.82 cfs potential flow)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P2: POND 2

Hydrograph



Summary for Pond SW: PROPOSED BASIN A

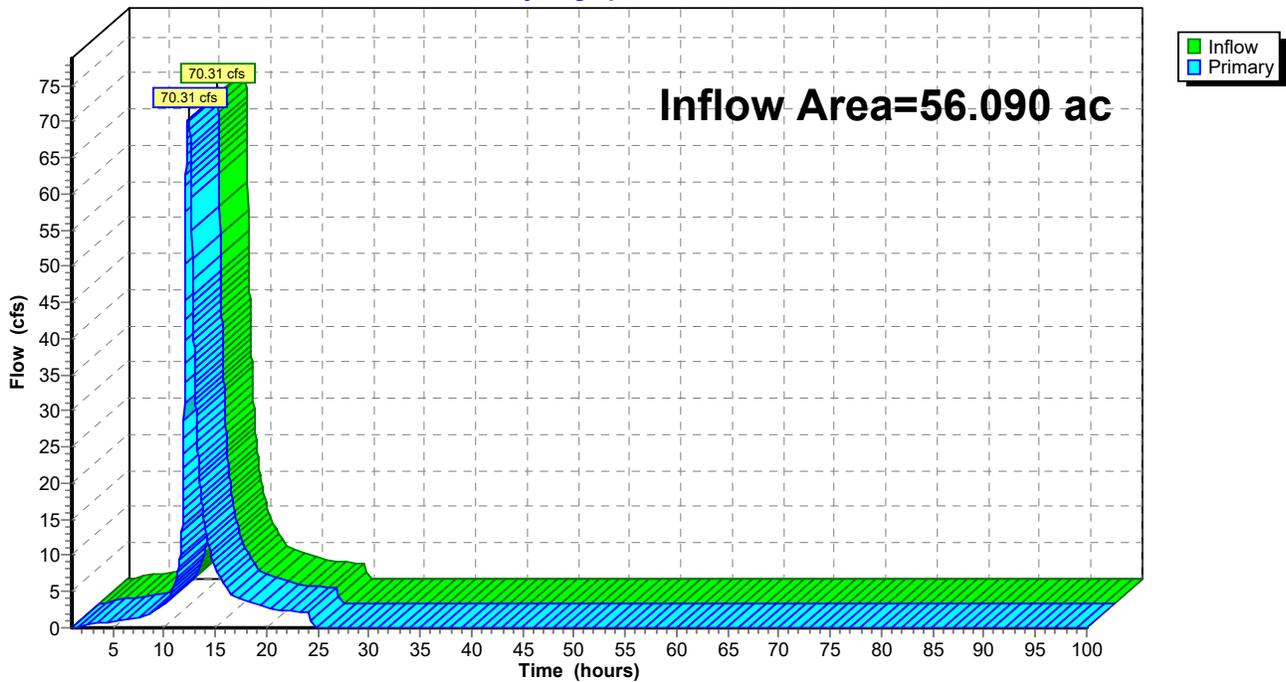
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 56.090 ac, 38.00% Impervious, Inflow Depth = 2.63" for 5 - Year event
Inflow = 70.31 cfs @ 12.39 hrs, Volume= 12.313 af
Primary = 70.31 cfs @ 12.39 hrs, Volume= 12.313 af, Atten= 0%, Lag= 0.0 min
Routed to Pond TP : TOTAL PROPOSED

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond SW: PROPOSED BASIN A

Hydrograph



Summary for Pond TP: TOTAL PROPOSED

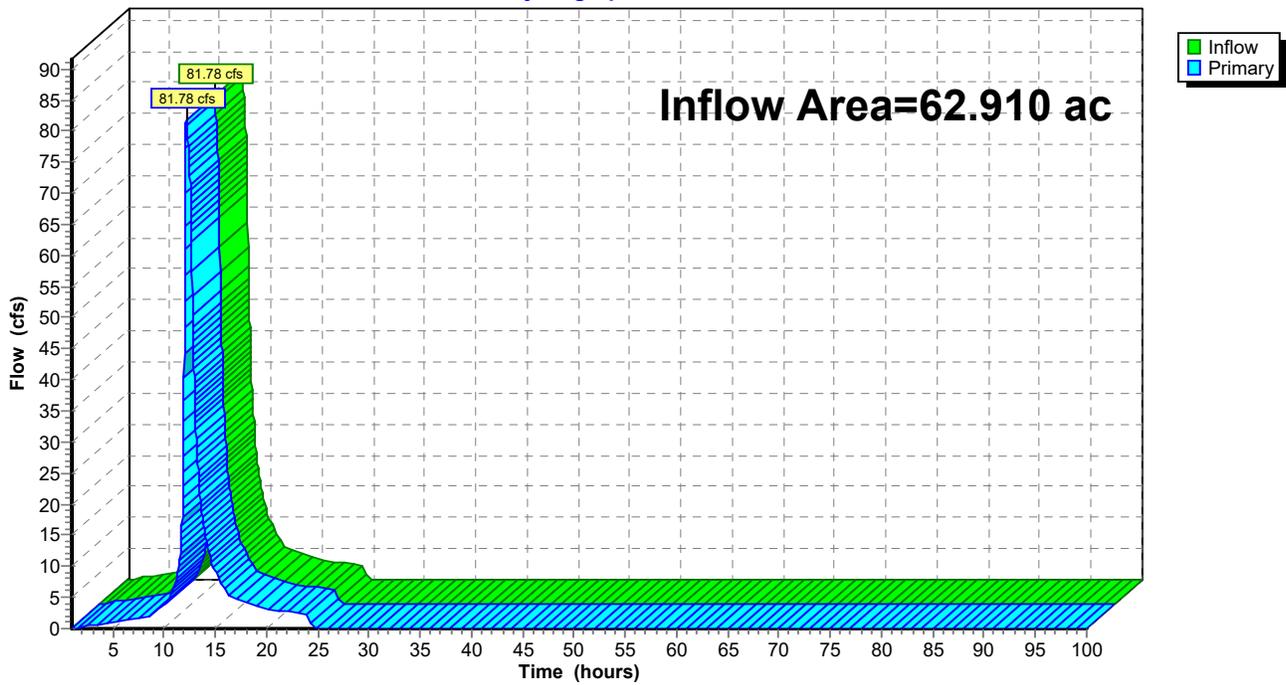
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.910 ac, 38.28% Impervious, Inflow Depth = 2.64" for 5 - Year event
Inflow = 81.78 cfs @ 12.20 hrs, Volume= 13.835 af
Primary = 81.78 cfs @ 12.20 hrs, Volume= 13.835 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond TP: TOTAL PROPOSED

Hydrograph



10-YEAR

22-02-17_GNCV_Drainage Report_02104805

Type II 24-hr 10 - Year Rainfall=4.69"

Prepared by Olsson

Printed 2/17/2022

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Page 36

Time span=1.00-100.00 hrs, dt=0.02 hrs, 4951 points
 Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA1: PROPOSED Runoff Area=25.320 ac 38.00% Impervious Runoff Depth=3.32"
 Flow Length=1,825' Tc=21.7 min CN=80/98 Runoff=84.01 cfs 7.004 af

SubcatchmentA2: PROPOSED Runoff Area=10.600 ac 38.00% Impervious Runoff Depth=3.32"
 Flow Length=1,340' Tc=18.3 min CN=80/98 Runoff=38.65 cfs 2.932 af

SubcatchmentA3: PROPOSED Runoff Area=17.760 ac 38.00% Impervious Runoff Depth=3.32"
 Flow Length=1,845' Tc=19.3 min CN=80/98 Runoff=62.93 cfs 4.913 af

SubcatchmentA4: PROPOSED SUB-BASIN Runoff Area=2.410 ac 38.00% Impervious Runoff Depth>3.32"
 Tc=9.0 min CN=80/98 Runoff=11.77 cfs 0.667 af

SubcatchmentB1: PROPOSED SUB-BASIN Runoff Area=6.820 ac 40.56% Impervious Runoff Depth=3.37"
 Flow Length=1,285' Tc=18.9 min CN=80/98 Runoff=24.68 cfs 1.913 af

Pond P1: POND 1 Peak Elev=1,471.31' Storage=70,778 cf Inflow=84.01 cfs 7.004 af
 Outflow=47.65 cfs 7.004 af

Pond P2: POND 2 Peak Elev=1,459.27' Storage=99,897 cf Inflow=144.29 cfs 15.516 af
 Outflow=78.13 cfs 15.516 af

Pond SW: PROPOSED BASIN A Inflow=78.13 cfs 15.516 af
 Primary=78.13 cfs 15.516 af

Pond TP: TOTAL PROPOSED Inflow=93.91 cfs 17.429 af
 Primary=93.91 cfs 17.429 af

Total Runoff Area = 62.910 ac Runoff Volume = 17.429 af Average Runoff Depth = 3.32"
61.72% Pervious = 38.830 ac 38.28% Impervious = 24.080 ac

Summary for Subcatchment A1: PROPOSED SUB-BASIN A1

[47] Hint: Peak is 301% of capacity of segment #2

Runoff = 84.01 cfs @ 12.14 hrs, Volume= 7.004 af, Depth= 3.32"
 Routed to Pond P1 : POND 1

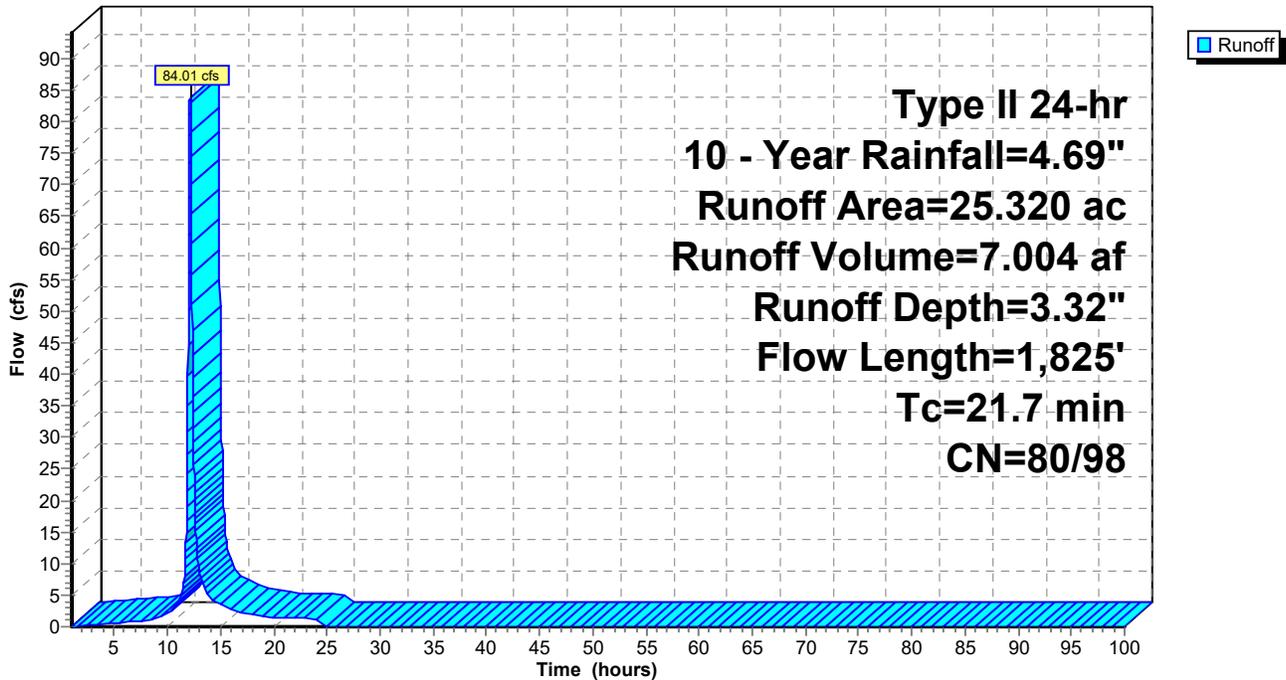
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 10 - Year Rainfall=4.69"

Area (ac)	CN	Description
25.320	87	1/4 acre lots, 38% imp, HSG D
15.698	80	62.00% Pervious Area
9.622	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	150	0.0100	0.14		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
1.0	560	0.0130	8.89	27.94	Pipe Channel, RCP_Round 24" 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
0.9	375	0.0200	6.67	160.11	Trap/Vee/Rect Channel Flow, CHANNEL Bot.W=4.00' D=2.00' Z= 4.0 '/' Top.W=20.00' n= 0.035 Earth, dense weeds
1.0	610	0.0400	10.26	821.11	Trap/Vee/Rect Channel Flow, Bot.W=20.00' D=2.00' Z= 10.0 '/' Top.W=60.00' n= 0.035 Earth, dense weeds
0.3	130	0.0100	6.51	429.85	Trap/Vee/Rect Channel Flow, Bot.W=10.00' D=3.00' Z= 4.0 '/' Top.W=34.00' n= 0.035 Earth, dense weeds
21.7	1,825	Total			

Subcatchment A1: PROPOSED SUB-BASIN A1

Hydrograph



Summary for Subcatchment A2: PROPOSED SUB-BASIN A2

[47] Hint: Peak is 260% of capacity of segment #3

Runoff = 38.65 cfs @ 12.10 hrs, Volume= 2.932 af, Depth= 3.32"
 Routed to Pond P2 : POND 2

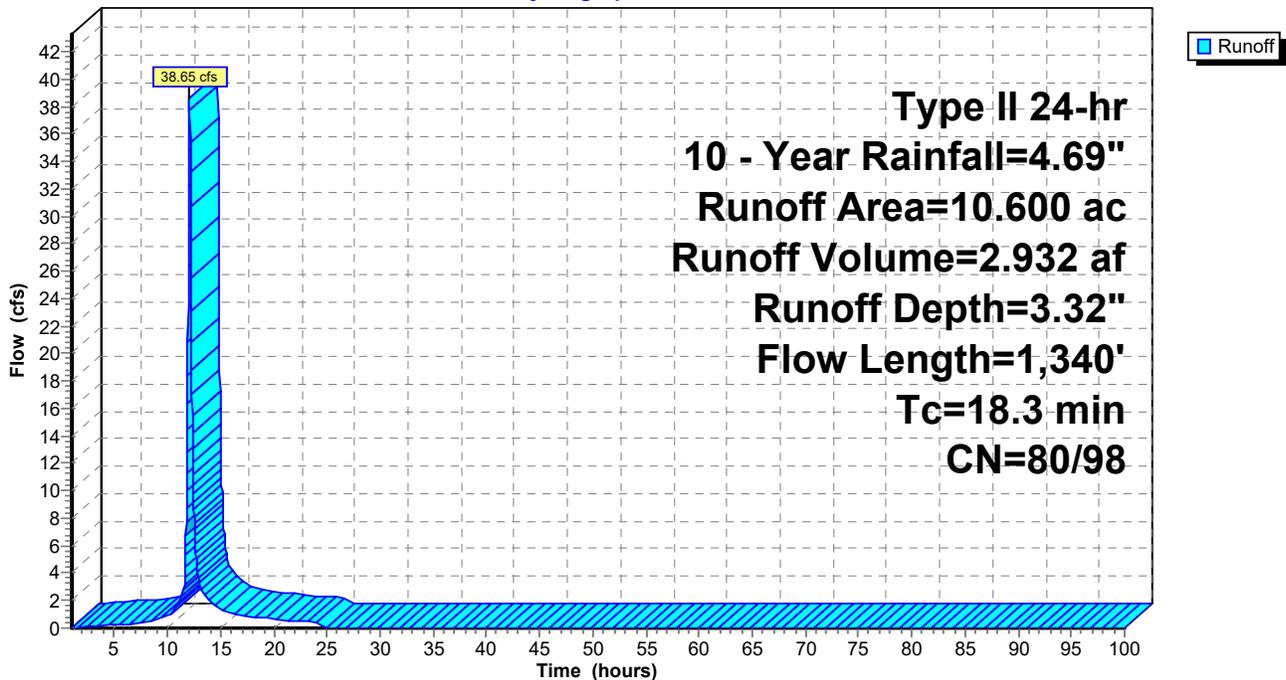
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 10 - Year Rainfall=4.69"

Area (ac)	CN	Description
10.600	87	1/4 acre lots, 38% imp, HSG D
6.572	80	62.00% Pervious Area
4.028	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
3.2	390	0.0100	2.03		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
1.1	800	0.0450	12.10	14.85	Pipe Channel, RCP_Round 15" 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
18.3	1,340	Total			

Subcatchment A2: PROPOSED SUB-BASIN A2

Hydrograph



Summary for Subcatchment A3: PROPOSED SUB-BASIN A3

[47] Hint: Peak is 182% of capacity of segment #3

[47] Hint: Peak is 123% of capacity of segment #4

Runoff = 62.93 cfs @ 12.11 hrs, Volume= 4.913 af, Depth= 3.32"
 Routed to Pond P2 : POND 2

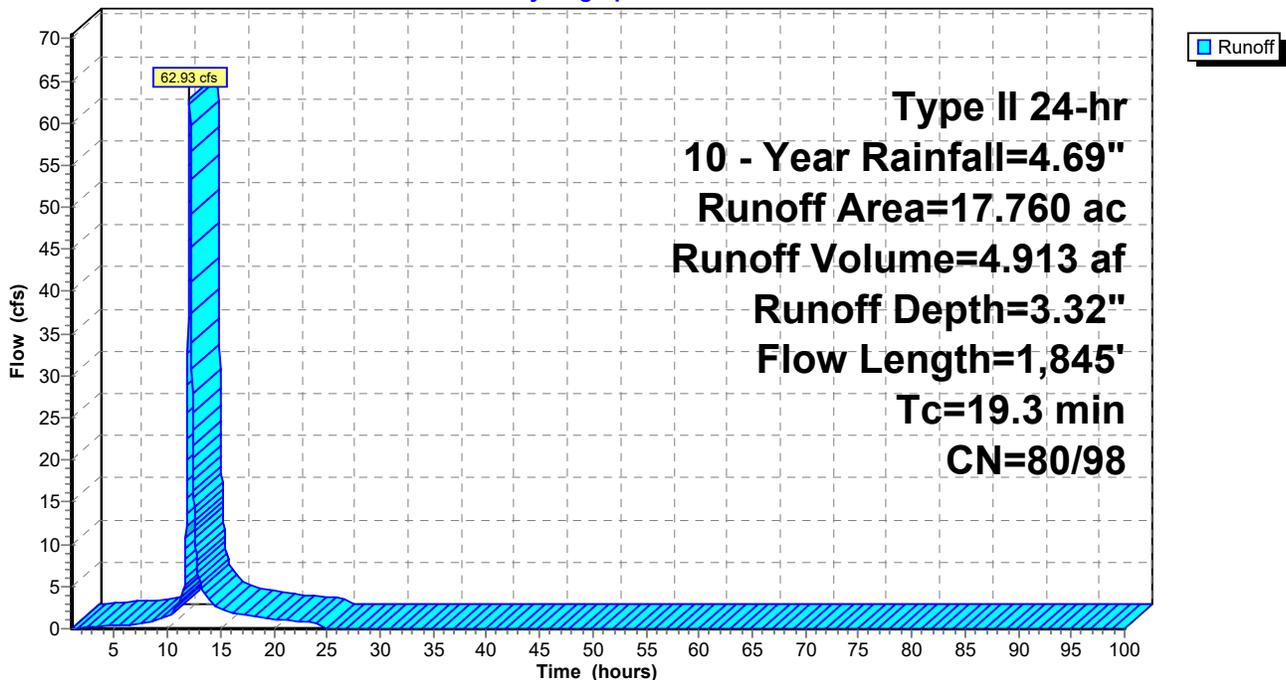
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 10 - Year Rainfall=4.69"

Area (ac)	CN	Description
17.760	87	1/4 acre lots, 38% imp, HSG D
11.011	80	62.00% Pervious Area
6.749	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
3.8	840	0.0325	3.66		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
1.0	655	0.0200	11.03	34.66	Pipe Channel, RCP_Round 24" 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
0.5	200	0.0050	7.23	51.09	Pipe Channel, RCP_Round 36" 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012 Concrete pipe, finished
19.3	1,845	Total			

Subcatchment A3: PROPOSED SUB-BASIN A3

Hydrograph



Summary for Subcatchment A4: PROPOSED SUB-BASIN A4

Runoff = 11.77 cfs @ 12.00 hrs, Volume= 0.667 af, Depth> 3.32"
 Routed to Pond P2 : POND 2

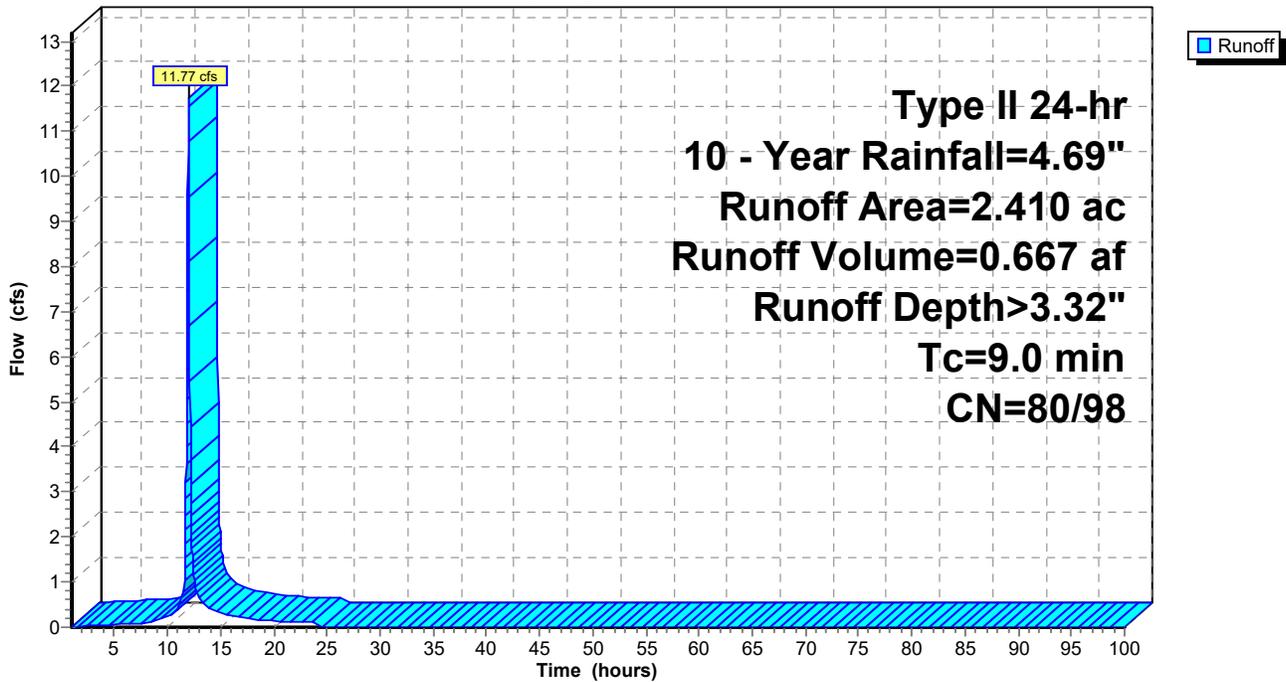
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 10 - Year Rainfall=4.69"

Area (ac)	CN	Description
2.410	87	1/4 acre lots, 38% imp, HSG D
1.494	80	62.00% Pervious Area
0.916	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0					Direct Entry, direct

Subcatchment A4: PROPOSED SUB-BASIN A4

Hydrograph



Summary for Subcatchment B1: PROPOSED SUB-BASIN B1

[47] Hint: Peak is 499% of capacity of segment #3

Runoff = 24.68 cfs @ 12.11 hrs, Volume= 1.913 af, Depth= 3.37"
 Routed to Pond TP : TOTAL PROPOSED

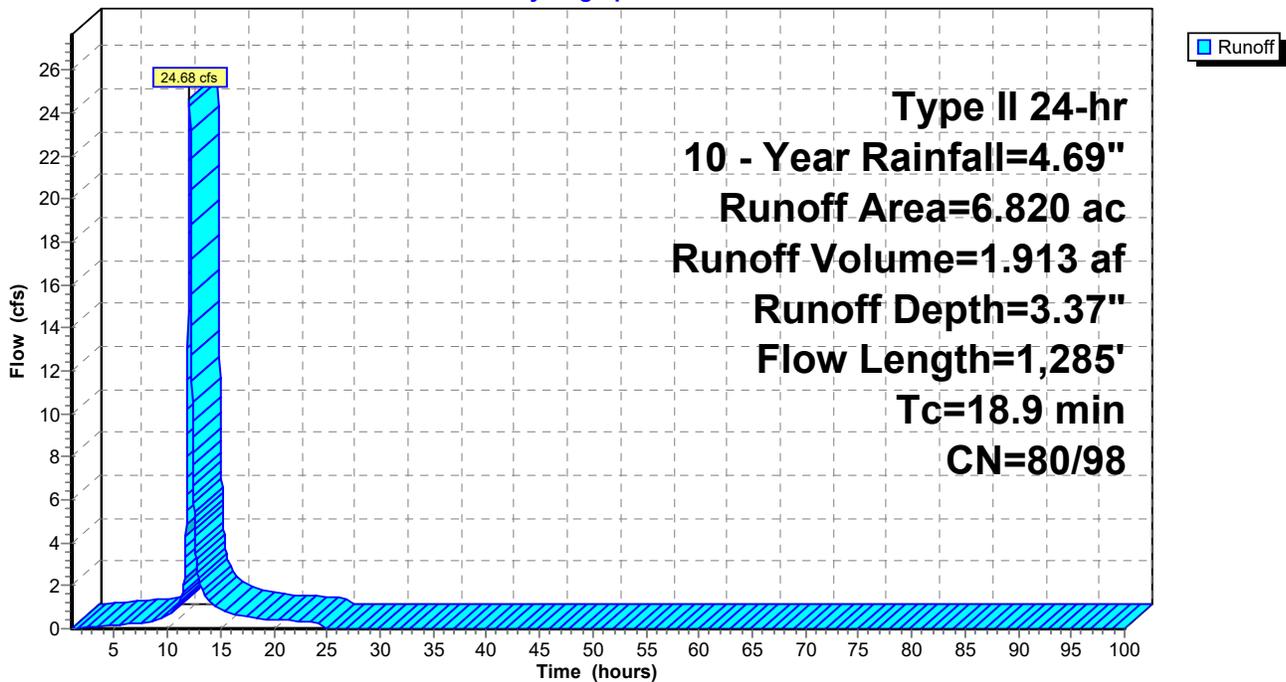
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 10 - Year Rainfall=4.69"

Area (ac)	CN	Description
0.505	98	Paved parking, HSG C
0.365	74	>75% Grass cover, Good, HSG C
5.950	87	1/4 acre lots, 38% imp, HSG D
6.820	87	Weighted Average
4.054	80	59.44% Pervious Area
2.766	98	40.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
1.8	385	0.0325	3.66		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
3.1	750	0.0050	4.03	4.95	Pipe Channel, RCP_Round 15" 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
18.9	1,285	Total			

Subcatchment B1: PROPOSED SUB-BASIN B1

Hydrograph



Summary for Pond P1: POND 1

Inflow Area = 25.320 ac, 38.00% Impervious, Inflow Depth = 3.32" for 10 - Year event
 Inflow = 84.01 cfs @ 12.14 hrs, Volume= 7.004 af
 Outflow = 47.65 cfs @ 12.34 hrs, Volume= 7.004 af, Atten= 43%, Lag= 11.9 min
 Primary = 47.65 cfs @ 12.34 hrs, Volume= 7.004 af
 Routed to Pond P2 : POND 2

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Peak Elev= 1,471.31' @ 12.34 hrs Surf.Area= 29,147 sf Storage= 70,778 cf

Plug-Flow detention time= 24.5 min calculated for 7.003 af (100% of inflow)
 Center-of-Mass det. time= 24.5 min (821.5 - 797.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,466.00'	223,730 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,466.00	47	0	0
1,467.00	1,629	838	838
1,468.00	8,552	5,091	5,929
1,469.00	15,452	12,002	17,931
1,470.00	22,468	18,960	36,891
1,471.00	27,518	24,993	61,884
1,472.00	32,708	30,113	91,997
1,473.00	38,157	35,433	127,429
1,474.00	44,645	41,401	168,830
1,475.00	65,155	54,900	223,730

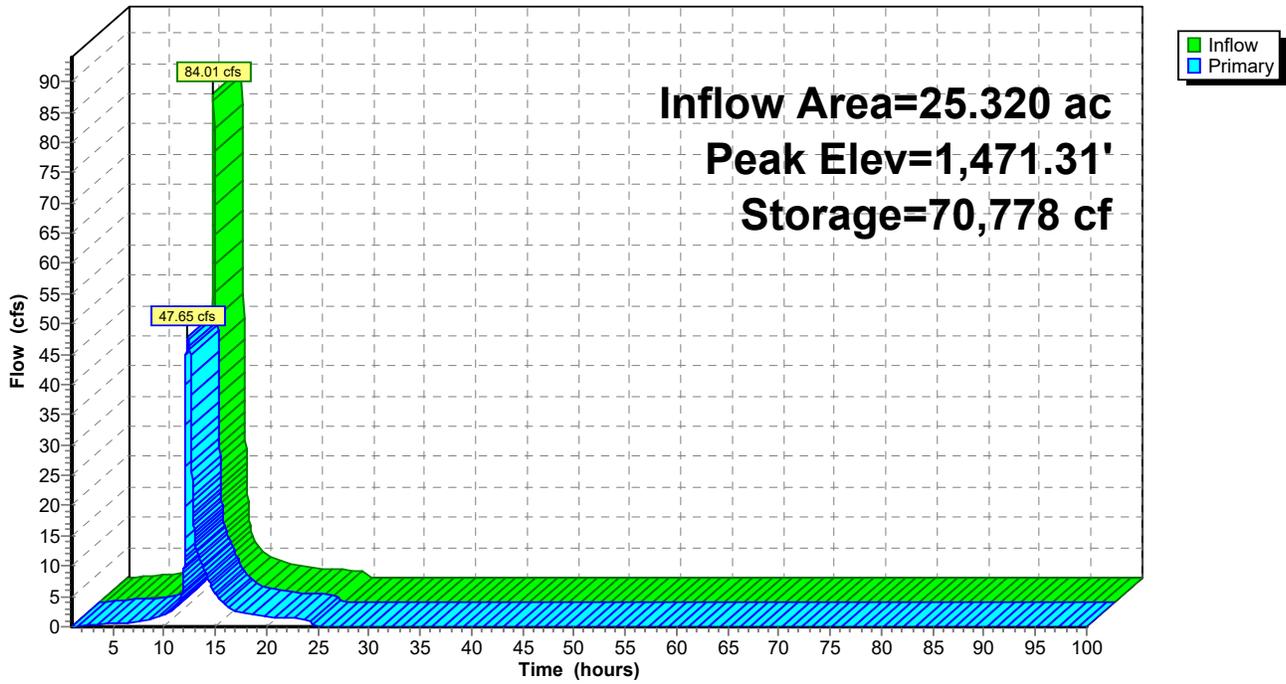
Device	Routing	Invert	Outlet Devices
#1	Primary	1,466.00'	30.0" Round RCP_Round 30" L= 300.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,466.00' / 1,462.00' S= 0.0133 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf
#2	Primary	1,474.10'	30.0' long + 4.0 ' SideZ x 60.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	1,470.00'	36.0" x 36.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	1,466.00'	6.0" W x 48.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=47.64 cfs @ 12.34 hrs HW=1,471.31' TW=1,459.19' (Dynamic Tailwater)

- 1=RCP_Round 30" (Inlet Controls 47.64 cfs @ 9.71 fps)
- 3=Orifice/Grate (Passes < 49.66 cfs potential flow)
- 4=Orifice/Grate (Passes < 17.24 cfs potential flow)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P1: POND 1

Hydrograph



Summary for Pond P2: POND 2

[44] Hint: Outlet device #4 is below defined storage

Inflow Area = 56.090 ac, 38.00% Impervious, Inflow Depth = 3.32" for 10 - Year event
 Inflow = 144.29 cfs @ 12.15 hrs, Volume= 15.516 af
 Outflow = 78.13 cfs @ 12.44 hrs, Volume= 15.516 af, Atten= 46%, Lag= 17.1 min
 Primary = 78.13 cfs @ 12.44 hrs, Volume= 15.516 af
 Routed to Pond SW : PROPOSED BASIN A

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Peak Elev= 1,459.27' @ 12.44 hrs Surf.Area= 33,295 sf Storage= 99,897 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 10.3 min (816.6 - 806.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,453.00'	255,649 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,453.00	626	0	0
1,454.00	4,028	2,327	2,327
1,455.00	9,182	6,605	8,932
1,456.00	14,691	11,937	20,869
1,457.00	20,468	17,580	38,448
1,458.00	26,393	23,431	61,879
1,459.00	32,062	29,228	91,106
1,460.00	36,645	34,354	125,460
1,461.00	41,061	38,853	164,313
1,462.00	45,630	43,346	207,658
1,463.00	50,351	47,991	255,649

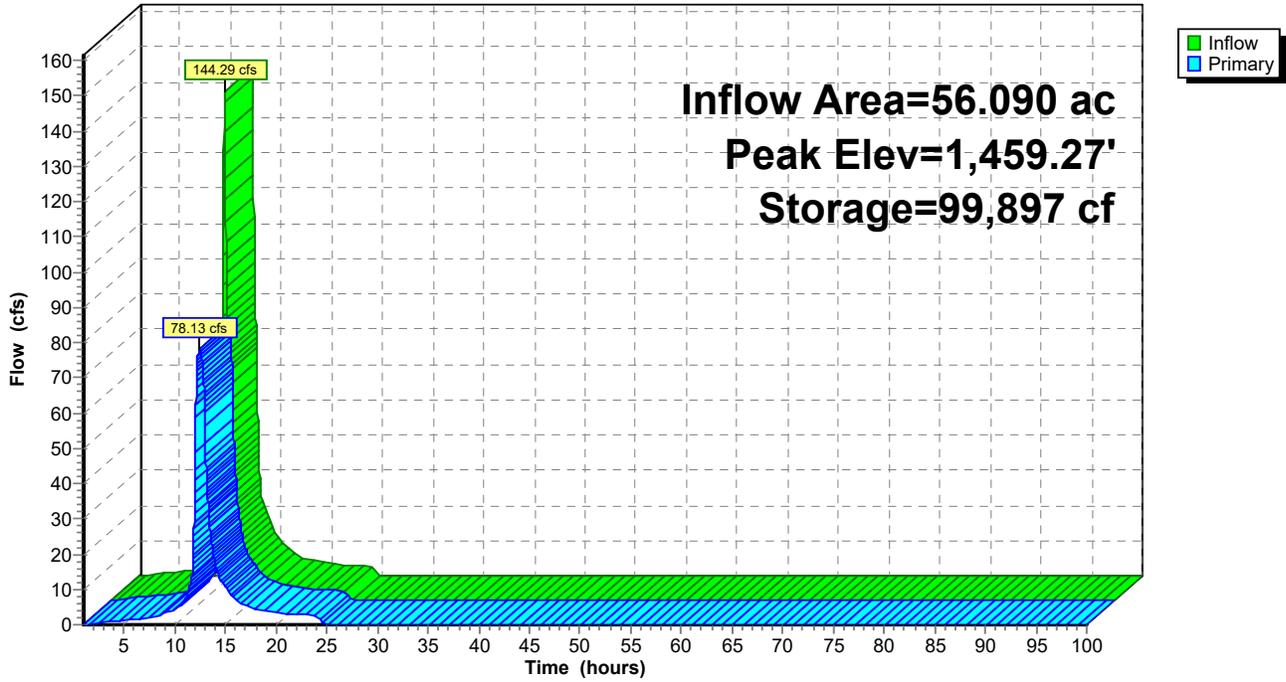
Device	Routing	Invert	Outlet Devices
#1	Primary	1,452.50'	36.0" Round RCP_Round 36" L= 95.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,452.50' / 1,452.00' S= 0.0053 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Primary	1,462.50'	35.0' long + 3.0 ' SideZ x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	1,457.00'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	1,452.50'	18.0" W x 54.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=78.12 cfs @ 12.44 hrs HW=1,459.27' TW=0.00' (Dynamic Tailwater)

- 1=RCP_Round 36" (Inlet Controls 78.12 cfs @ 11.05 fps)
- 3=Orifice/Grate (Passes < 116.04 cfs potential flow)
- 4=Orifice/Grate (Passes < 68.34 cfs potential flow)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P2: POND 2

Hydrograph



Summary for Pond SW: PROPOSED BASIN A

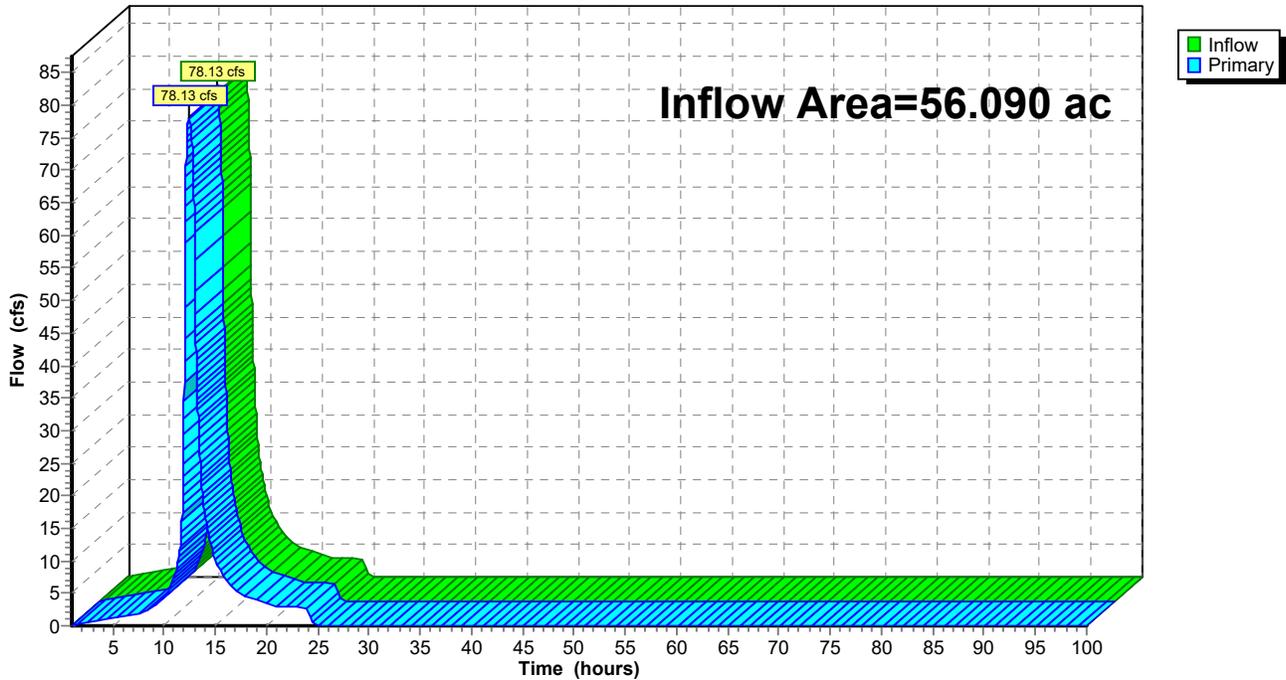
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 56.090 ac, 38.00% Impervious, Inflow Depth = 3.32" for 10 - Year event
Inflow = 78.13 cfs @ 12.44 hrs, Volume= 15.516 af
Primary = 78.13 cfs @ 12.44 hrs, Volume= 15.516 af, Atten= 0%, Lag= 0.0 min
Routed to Pond TP : TOTAL PROPOSED

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond SW: PROPOSED BASIN A

Hydrograph



Summary for Pond TP: TOTAL PROPOSED

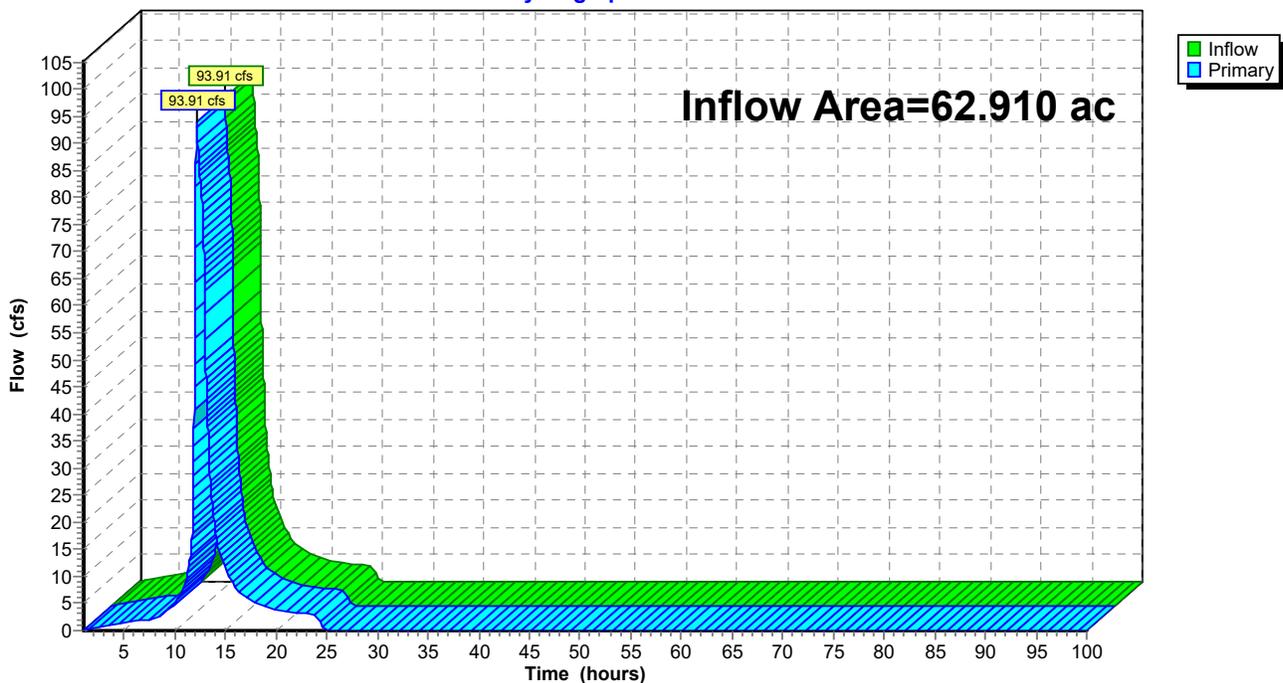
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.910 ac, 38.28% Impervious, Inflow Depth = 3.32" for 10 - Year event
Inflow = 93.91 cfs @ 12.18 hrs, Volume= 17.429 af
Primary = 93.91 cfs @ 12.18 hrs, Volume= 17.429 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond TP: TOTAL PROPOSED

Hydrograph



50-YEAR

22-02-17_GNCV_Drainage Report_02104805

Type II 24-hr 50yr Rainfall=6.00"

Prepared by Olsson

Printed 2/17/2022

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Page 51

Time span=1.00-100.00 hrs, dt=0.02 hrs, 4951 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA1: PROPOSED Runoff Area=25.320 ac 38.00% Impervious Runoff Depth>4.53"
Flow Length=1,825' Tc=21.7 min CN=80/98 Runoff=114.54 cfs 9.566 af

SubcatchmentA2: PROPOSED Runoff Area=10.600 ac 38.00% Impervious Runoff Depth>4.53"
Flow Length=1,340' Tc=18.3 min CN=80/98 Runoff=52.66 cfs 4.005 af

SubcatchmentA3: PROPOSED Runoff Area=17.760 ac 38.00% Impervious Runoff Depth>4.53"
Flow Length=1,845' Tc=19.3 min CN=80/98 Runoff=85.76 cfs 6.710 af

SubcatchmentA4: PROPOSED SUB-BASIN Runoff Area=2.410 ac 38.00% Impervious Runoff Depth>4.53"
Tc=9.0 min CN=80/98 Runoff=15.98 cfs 0.910 af

SubcatchmentB1: PROPOSED SUB-BASIN Runoff Area=6.820 ac 40.56% Impervious Runoff Depth>4.58"
Flow Length=1,285' Tc=18.9 min CN=80/98 Runoff=33.53 cfs 2.605 af

Pond P1: POND 1 Peak Elev=1,472.36' Storage=104,133 cf Inflow=114.54 cfs 9.566 af
Outflow=53.43 cfs 9.566 af

Pond P2: POND 2 Peak Elev=1,460.78' Storage=155,254 cf Inflow=193.29 cfs 21.192 af
Outflow=88.60 cfs 21.192 af

Pond SW: PROPOSED BASIN A Inflow=88.60 cfs 21.192 af
Primary=88.60 cfs 21.192 af

Pond TP: TOTAL PROPOSED Inflow=111.43 cfs 23.797 af
Primary=111.43 cfs 23.797 af

Total Runoff Area = 62.910 ac Runoff Volume = 23.797 af Average Runoff Depth = 4.54"
61.72% Pervious = 38.830 ac 38.28% Impervious = 24.080 ac

Summary for Subcatchment A1: PROPOSED SUB-BASIN A1

[47] Hint: Peak is 410% of capacity of segment #2

Runoff = 114.54 cfs @ 12.14 hrs, Volume= 9.566 af, Depth> 4.53"
 Routed to Pond P1 : POND 1

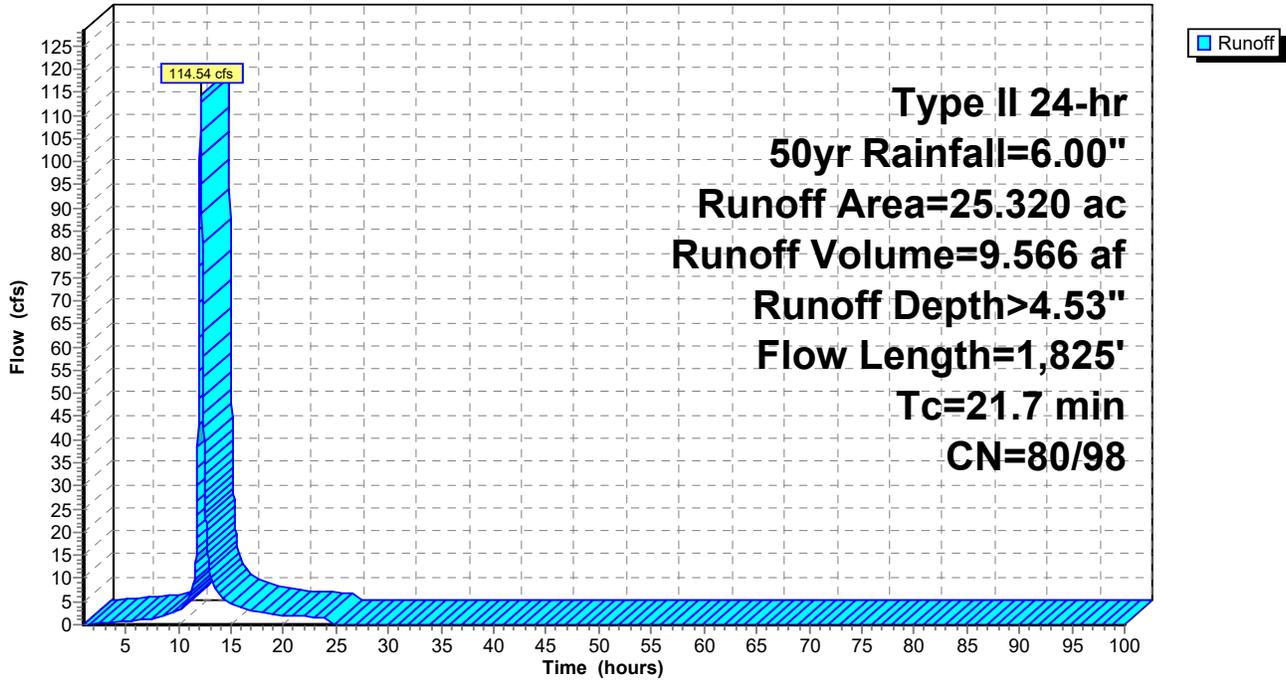
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 50yr Rainfall=6.00"

Area (ac)	CN	Description
25.320	87	1/4 acre lots, 38% imp, HSG D
15.698	80	62.00% Pervious Area
9.622	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	150	0.0100	0.14		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
1.0	560	0.0130	8.89	27.94	Pipe Channel, RCP_Round 24" 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
0.9	375	0.0200	6.67	160.11	Trap/Vee/Rect Channel Flow, CHANNEL Bot.W=4.00' D=2.00' Z= 4.0 '/' Top.W=20.00' n= 0.035 Earth, dense weeds
1.0	610	0.0400	10.26	821.11	Trap/Vee/Rect Channel Flow, Bot.W=20.00' D=2.00' Z= 10.0 '/' Top.W=60.00' n= 0.035 Earth, dense weeds
0.3	130	0.0100	6.51	429.85	Trap/Vee/Rect Channel Flow, Bot.W=10.00' D=3.00' Z= 4.0 '/' Top.W=34.00' n= 0.035 Earth, dense weeds
21.7	1,825	Total			

Subcatchment A1: PROPOSED SUB-BASIN A1

Hydrograph



Summary for Subcatchment A2: PROPOSED SUB-BASIN A2

[47] Hint: Peak is 355% of capacity of segment #3

Runoff = 52.66 cfs @ 12.10 hrs, Volume= 4.005 af, Depth> 4.53"
 Routed to Pond P2 : POND 2

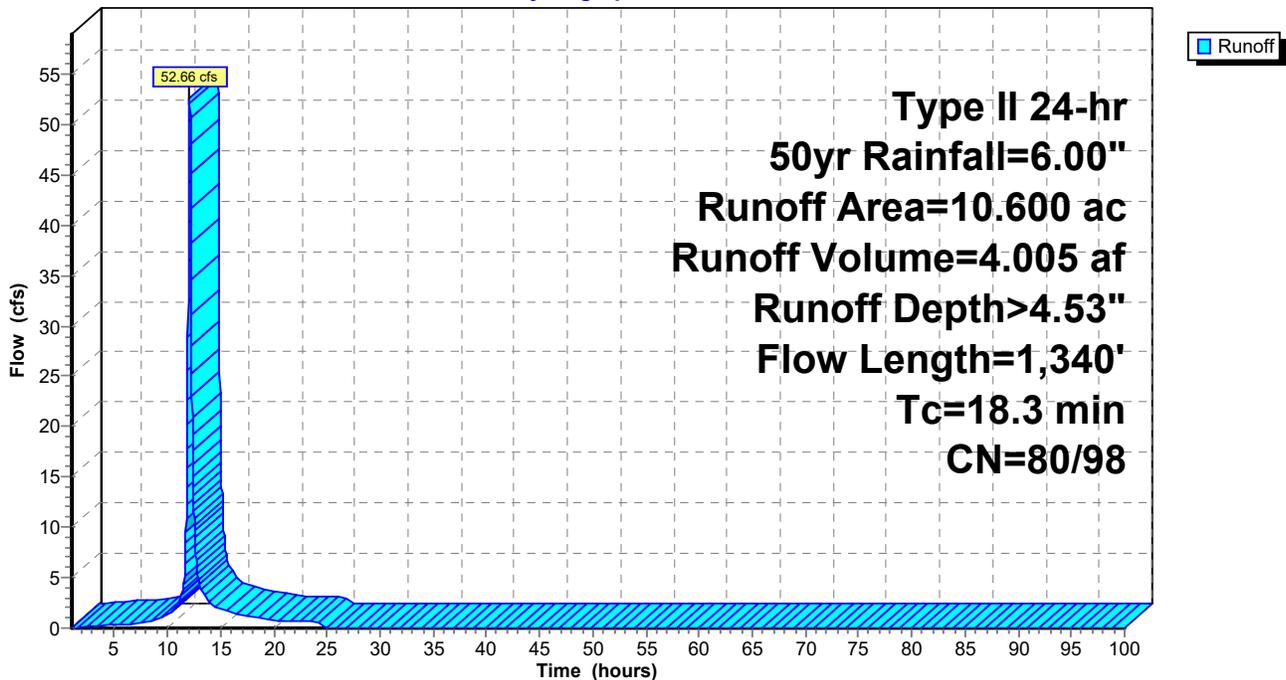
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 50yr Rainfall=6.00"

Area (ac)	CN	Description
10.600	87	1/4 acre lots, 38% imp, HSG D
6.572	80	62.00% Pervious Area
4.028	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
3.2	390	0.0100	2.03		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
1.1	800	0.0450	12.10	14.85	Pipe Channel, RCP_Round 15" 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
18.3	1,340	Total			

Subcatchment A2: PROPOSED SUB-BASIN A2

Hydrograph



Summary for Subcatchment A3: PROPOSED SUB-BASIN A3

[47] Hint: Peak is 247% of capacity of segment #3

[47] Hint: Peak is 168% of capacity of segment #4

Runoff = 85.76 cfs @ 12.11 hrs, Volume= 6.710 af, Depth> 4.53"
 Routed to Pond P2 : POND 2

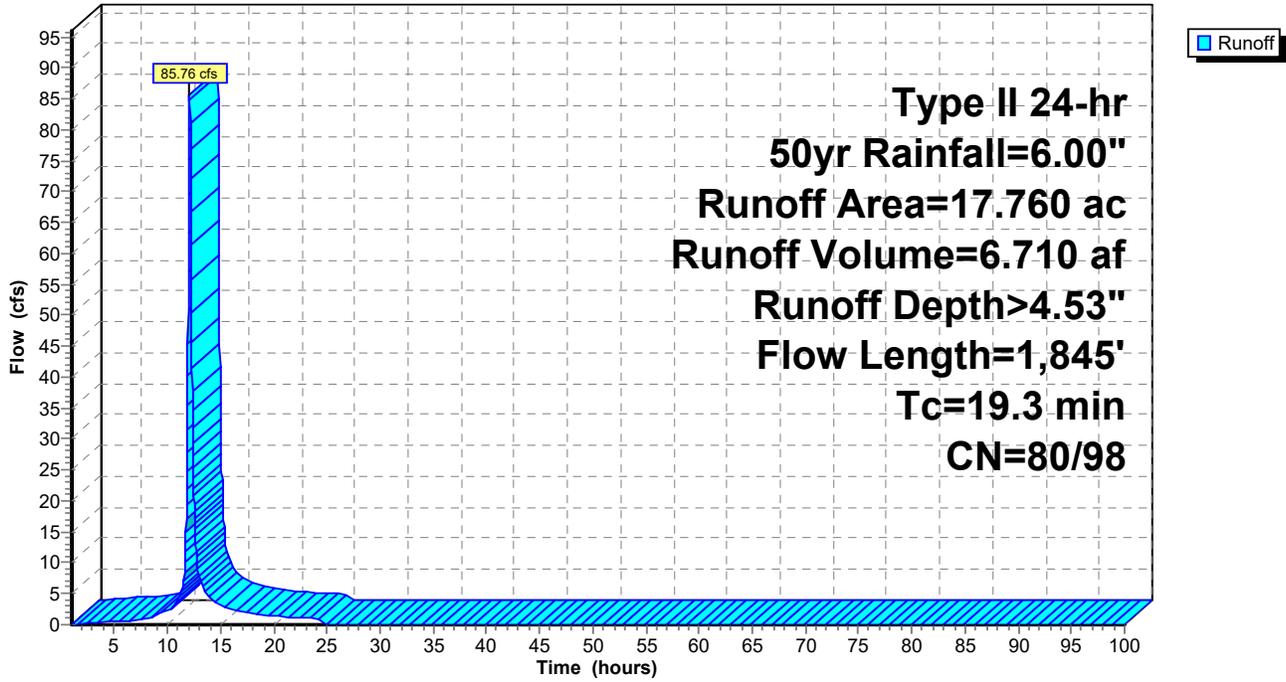
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 50yr Rainfall=6.00"

Area (ac)	CN	Description
17.760	87	1/4 acre lots, 38% imp, HSG D
11.011	80	62.00% Pervious Area
6.749	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
3.8	840	0.0325	3.66		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
1.0	655	0.0200	11.03	34.66	Pipe Channel, RCP_Round 24" 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
0.5	200	0.0050	7.23	51.09	Pipe Channel, RCP_Round 36" 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012 Concrete pipe, finished
19.3	1,845	Total			

Subcatchment A3: PROPOSED SUB-BASIN A3

Hydrograph



Summary for Subcatchment A4: PROPOSED SUB-BASIN A4

Runoff = 15.98 cfs @ 12.00 hrs, Volume= 0.910 af, Depth> 4.53"
 Routed to Pond P2 : POND 2

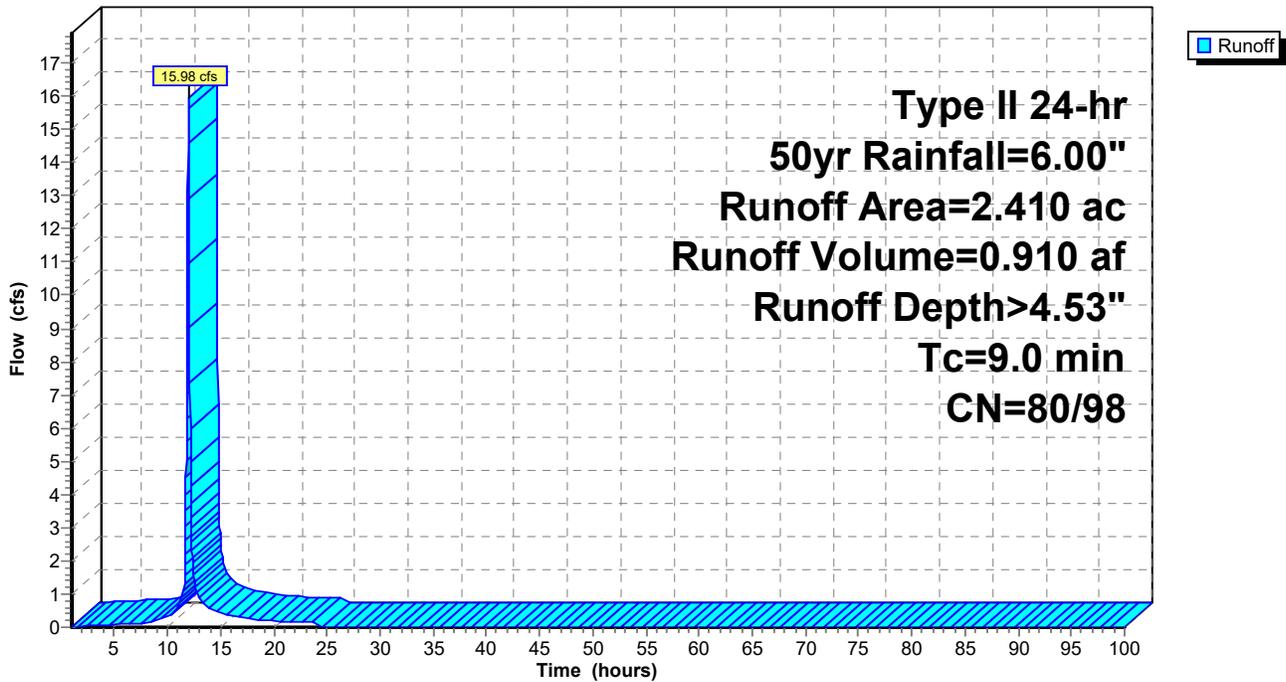
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 50yr Rainfall=6.00"

Area (ac)	CN	Description
2.410	87	1/4 acre lots, 38% imp, HSG D
1.494	80	62.00% Pervious Area
0.916	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0					Direct Entry, direct

Subcatchment A4: PROPOSED SUB-BASIN A4

Hydrograph



Summary for Subcatchment B1: PROPOSED SUB-BASIN B1

[47] Hint: Peak is 678% of capacity of segment #3

Runoff = 33.53 cfs @ 12.11 hrs, Volume= 2.605 af, Depth> 4.58"
 Routed to Pond TP : TOTAL PROPOSED

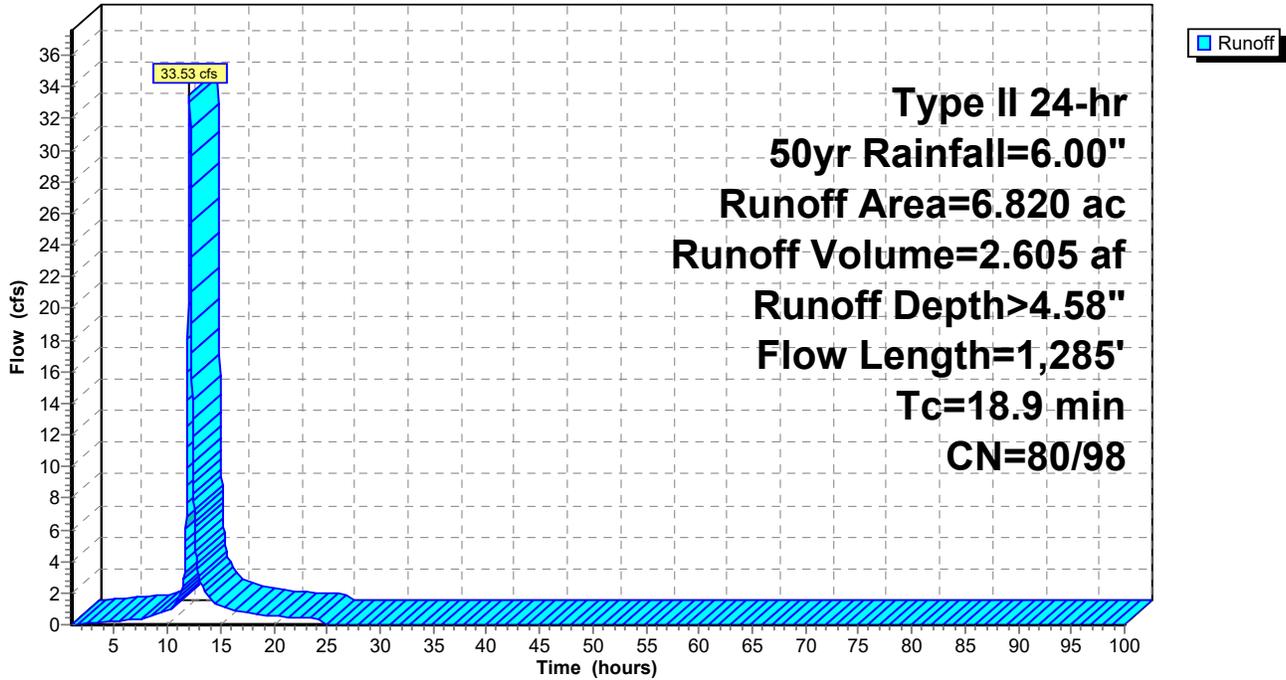
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 50yr Rainfall=6.00"

Area (ac)	CN	Description
0.505	98	Paved parking, HSG C
0.365	74	>75% Grass cover, Good, HSG C
5.950	87	1/4 acre lots, 38% imp, HSG D
6.820	87	Weighted Average
4.054	80	59.44% Pervious Area
2.766	98	40.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
1.8	385	0.0325	3.66		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
3.1	750	0.0050	4.03	4.95	Pipe Channel, RCP_Round 15" 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
18.9	1,285	Total			

Subcatchment B1: PROPOSED SUB-BASIN B1

Hydrograph



Summary for Pond P1: POND 1

Inflow Area = 25.320 ac, 38.00% Impervious, Inflow Depth > 4.53" for 50yr event
 Inflow = 114.54 cfs @ 12.14 hrs, Volume= 9.566 af
 Outflow = 53.43 cfs @ 12.38 hrs, Volume= 9.566 af, Atten= 53%, Lag= 14.6 min
 Primary = 53.43 cfs @ 12.38 hrs, Volume= 9.566 af
 Routed to Pond P2 : POND 2

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Peak Elev= 1,472.36' @ 12.38 hrs Surf.Area= 34,671 sf Storage= 104,133 cf

Plug-Flow detention time= 26.8 min calculated for 9.566 af (100% of inflow)
 Center-of-Mass det. time= 26.3 min (818.1 - 791.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,466.00'	223,730 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,466.00	47	0	0
1,467.00	1,629	838	838
1,468.00	8,552	5,091	5,929
1,469.00	15,452	12,002	17,931
1,470.00	22,468	18,960	36,891
1,471.00	27,518	24,993	61,884
1,472.00	32,708	30,113	91,997
1,473.00	38,157	35,433	127,429
1,474.00	44,645	41,401	168,830
1,475.00	65,155	54,900	223,730

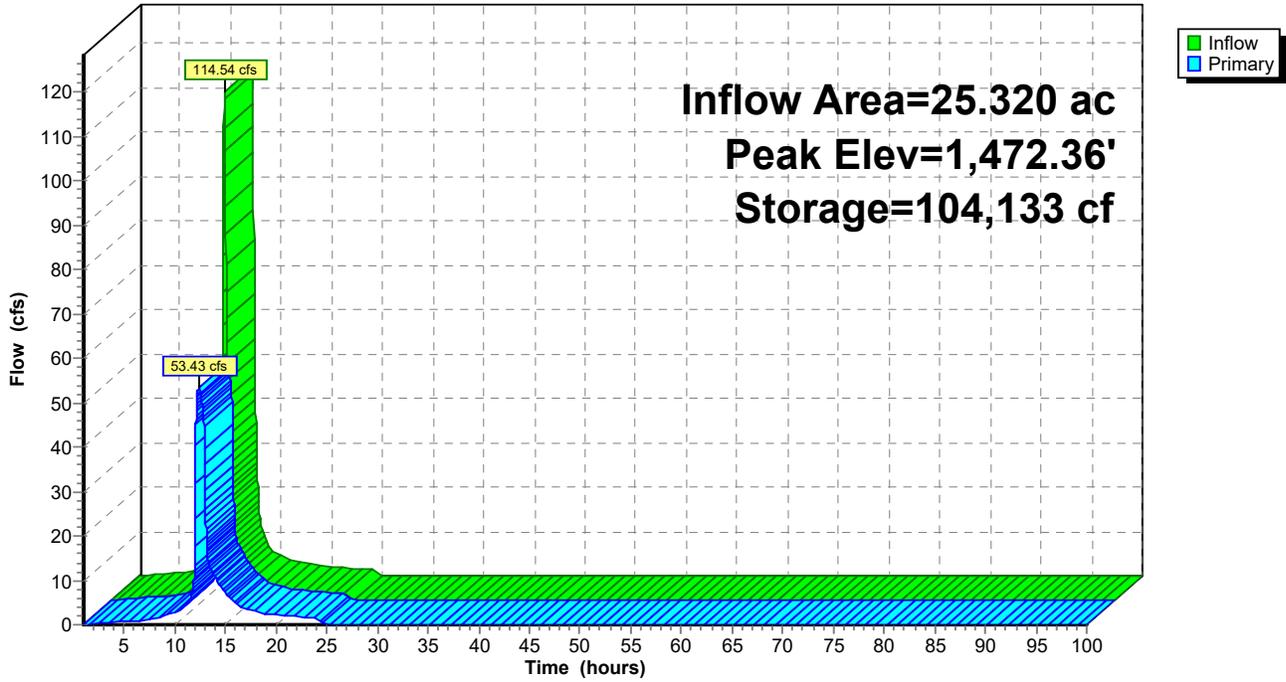
Device	Routing	Invert	Outlet Devices
#1	Primary	1,466.00'	30.0" Round RCP_Round 30" L= 300.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,466.00' / 1,462.00' S= 0.0133 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf
#2	Primary	1,474.10'	30.0' long + 4.0 ' SideZ x 60.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	1,470.00'	36.0" x 36.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	1,466.00'	6.0" W x 48.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=53.43 cfs @ 12.38 hrs HW=1,472.36' TW=1,460.71' (Dynamic Tailwater)

- 1=RCP_Round 30" (Inlet Controls 53.43 cfs @ 10.88 fps)
- 3=Orifice/Grate (Passes < 66.57 cfs potential flow)
- 4=Orifice/Grate (Passes < 19.92 cfs potential flow)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P1: POND 1

Hydrograph



Summary for Pond P2: POND 2

[44] Hint: Outlet device #4 is below defined storage

Inflow Area = 56.090 ac, 38.00% Impervious, Inflow Depth > 4.53" for 50yr event
 Inflow = 193.29 cfs @ 12.10 hrs, Volume= 21.192 af
 Outflow = 88.60 cfs @ 12.48 hrs, Volume= 21.192 af, Atten= 54%, Lag= 22.9 min
 Primary = 88.60 cfs @ 12.48 hrs, Volume= 21.192 af
 Routed to Pond SW : PROPOSED BASIN A

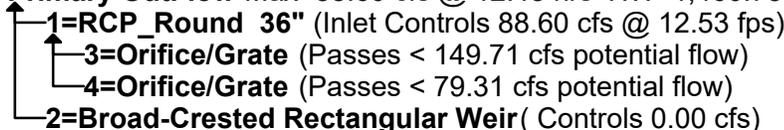
Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Peak Elev= 1,460.78' @ 12.48 hrs Surf.Area= 40,075 sf Storage= 155,254 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 14.1 min (816.0 - 801.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,453.00'	255,649 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,453.00	626	0	0
1,454.00	4,028	2,327	2,327
1,455.00	9,182	6,605	8,932
1,456.00	14,691	11,937	20,869
1,457.00	20,468	17,580	38,448
1,458.00	26,393	23,431	61,879
1,459.00	32,062	29,228	91,106
1,460.00	36,645	34,354	125,460
1,461.00	41,061	38,853	164,313
1,462.00	45,630	43,346	207,658
1,463.00	50,351	47,991	255,649

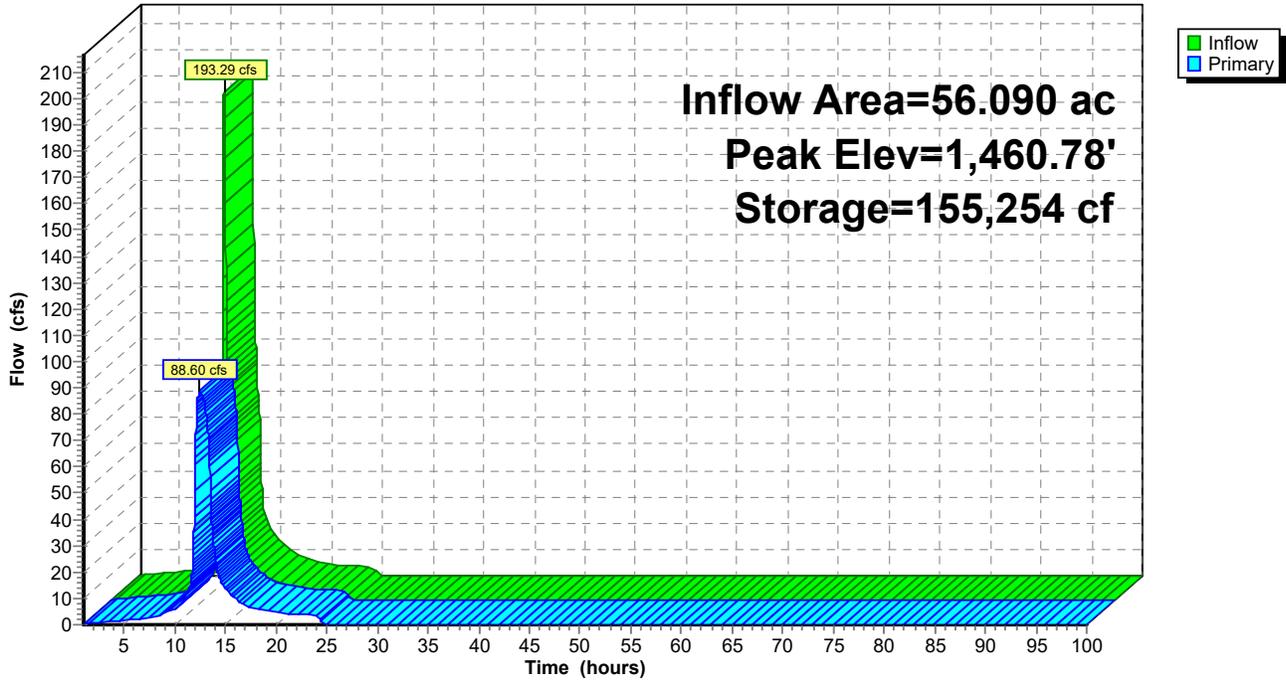
Device	Routing	Invert	Outlet Devices
#1	Primary	1,452.50'	36.0" Round RCP_Round 36" L= 95.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,452.50' / 1,452.00' S= 0.0053 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Primary	1,462.50'	35.0' long + 3.0 ' SideZ x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	1,457.00'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	1,452.50'	18.0" W x 54.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=88.60 cfs @ 12.48 hrs HW=1,460.78' TW=0.00' (Dynamic Tailwater)



Pond P2: POND 2

Hydrograph



Summary for Pond SW: PROPOSED BASIN A

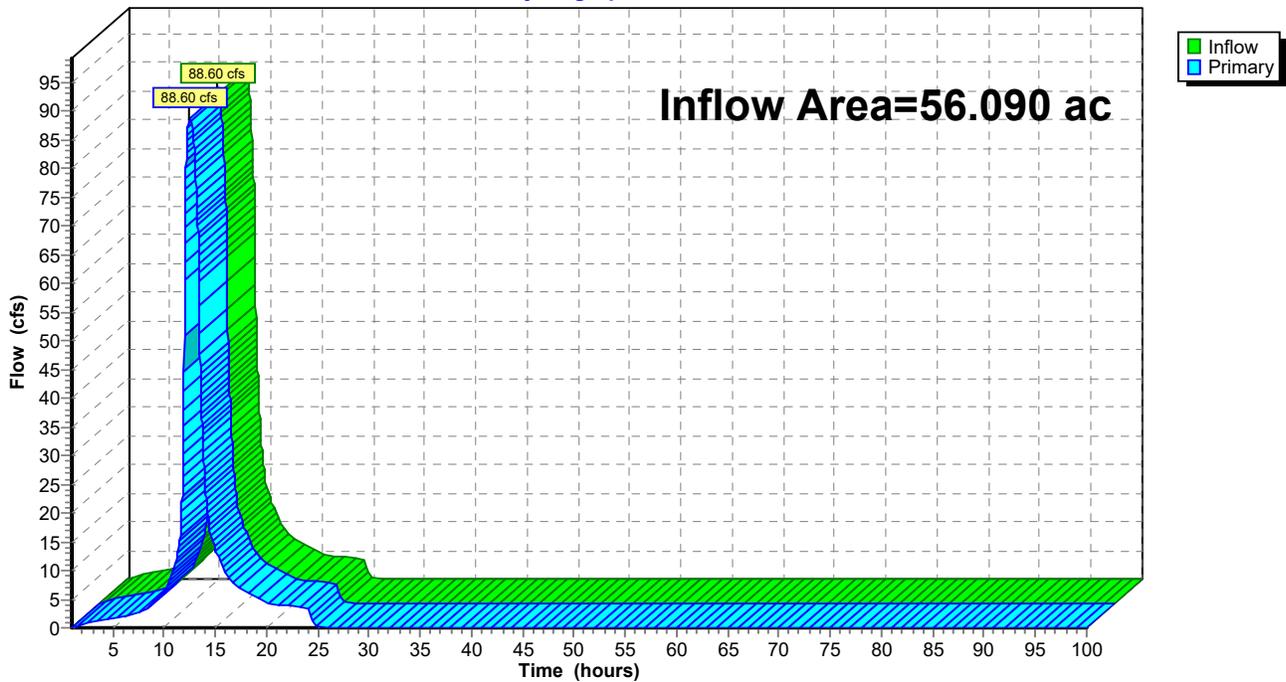
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 56.090 ac, 38.00% Impervious, Inflow Depth > 4.53" for 50yr event
Inflow = 88.60 cfs @ 12.48 hrs, Volume= 21.192 af
Primary = 88.60 cfs @ 12.48 hrs, Volume= 21.192 af, Atten= 0%, Lag= 0.0 min
Routed to Pond TP : TOTAL PROPOSED

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond SW: PROPOSED BASIN A

Hydrograph



Summary for Pond TP: TOTAL PROPOSED

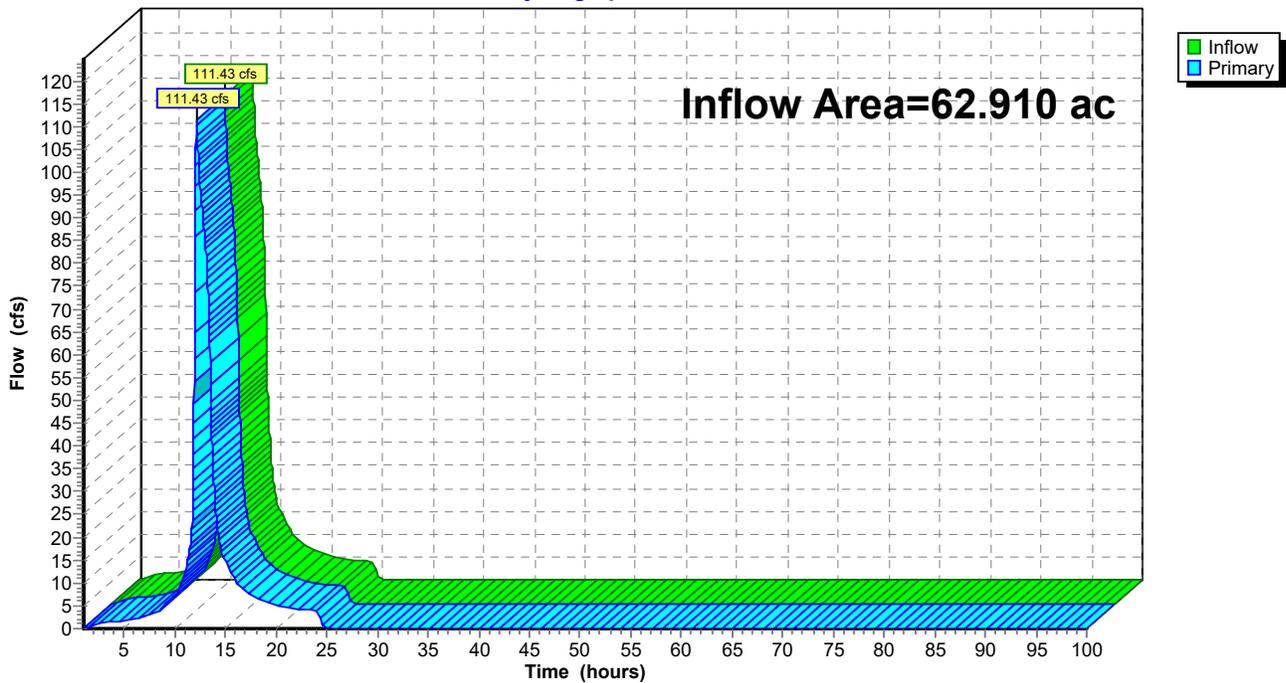
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.910 ac, 38.28% Impervious, Inflow Depth > 4.54" for 50yr event
Inflow = 111.43 cfs @ 12.16 hrs, Volume= 23.797 af
Primary = 111.43 cfs @ 12.16 hrs, Volume= 23.797 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond TP: TOTAL PROPOSED

Hydrograph



100-YEAR

Time span=1.00-100.00 hrs, dt=0.02 hrs, 4951 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA1: PROPOSED Runoff Area=25.320 ac 38.00% Impervious Runoff Depth>5.18"
Flow Length=1,825' Tc=21.7 min CN=80/98 Runoff=130.53 cfs 10.920 af

SubcatchmentA2: PROPOSED Runoff Area=10.600 ac 38.00% Impervious Runoff Depth>5.18"
Flow Length=1,340' Tc=18.3 min CN=80/98 Runoff=59.99 cfs 4.572 af

SubcatchmentA3: PROPOSED Runoff Area=17.760 ac 38.00% Impervious Runoff Depth>5.18"
Flow Length=1,845' Tc=19.3 min CN=80/98 Runoff=97.70 cfs 7.660 af

SubcatchmentA4: PROPOSED SUB-BASIN Runoff Area=2.410 ac 38.00% Impervious Runoff Depth>5.18"
Tc=9.0 min CN=80/98 Runoff=18.18 cfs 1.039 af

SubcatchmentB1: PROPOSED SUB-BASIN Runoff Area=6.820 ac 40.56% Impervious Runoff Depth>5.23"
Flow Length=1,285' Tc=18.9 min CN=80/98 Runoff=38.16 cfs 2.971 af

Pond P1: POND 1 Peak Elev=1,472.90' Storage=123,555 cf Inflow=130.53 cfs 10.920 af
Outflow=56.17 cfs 10.920 af

Pond P2: POND 2 Peak Elev=1,461.51' Storage=185,769 cf Inflow=215.60 cfs 24.191 af
Outflow=93.26 cfs 24.191 af

Pond SW: PROPOSED BASIN A Inflow=93.26 cfs 24.191 af
Primary=93.26 cfs 24.191 af

Pond TP: TOTAL PROPOSED Inflow=119.83 cfs 27.162 af
Primary=119.83 cfs 27.162 af

Total Runoff Area = 62.910 ac Runoff Volume = 27.162 af Average Runoff Depth = 5.18"
61.72% Pervious = 38.830 ac 38.28% Impervious = 24.080 ac

Summary for Subcatchment A1: PROPOSED SUB-BASIN A1

[47] Hint: Peak is 467% of capacity of segment #2

Runoff = 130.53 cfs @ 12.14 hrs, Volume= 10.920 af, Depth> 5.18"
 Routed to Pond P1 : POND 1

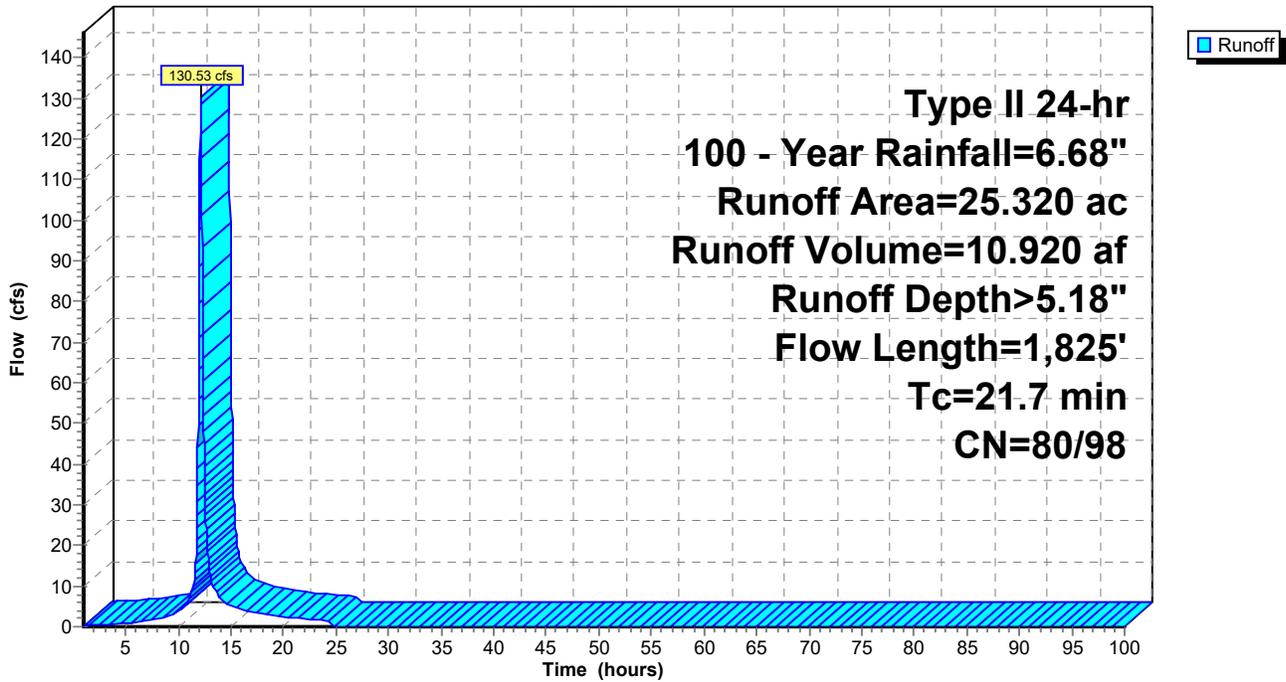
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 100 - Year Rainfall=6.68"

Area (ac)	CN	Description
25.320	87	1/4 acre lots, 38% imp, HSG D
15.698	80	62.00% Pervious Area
9.622	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	150	0.0100	0.14		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
1.0	560	0.0130	8.89	27.94	Pipe Channel, RCP_Round 24" 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
0.9	375	0.0200	6.67	160.11	Trap/Vee/Rect Channel Flow, CHANNEL Bot.W=4.00' D=2.00' Z= 4.0 '/' Top.W=20.00' n= 0.035 Earth, dense weeds
1.0	610	0.0400	10.26	821.11	Trap/Vee/Rect Channel Flow, Bot.W=20.00' D=2.00' Z= 10.0 '/' Top.W=60.00' n= 0.035 Earth, dense weeds
0.3	130	0.0100	6.51	429.85	Trap/Vee/Rect Channel Flow, Bot.W=10.00' D=3.00' Z= 4.0 '/' Top.W=34.00' n= 0.035 Earth, dense weeds
21.7	1,825	Total			

Subcatchment A1: PROPOSED SUB-BASIN A1

Hydrograph



Summary for Subcatchment A2: PROPOSED SUB-BASIN A2

[47] Hint: Peak is 404% of capacity of segment #3

Runoff = 59.99 cfs @ 12.10 hrs, Volume= 4.572 af, Depth> 5.18"
 Routed to Pond P2 : POND 2

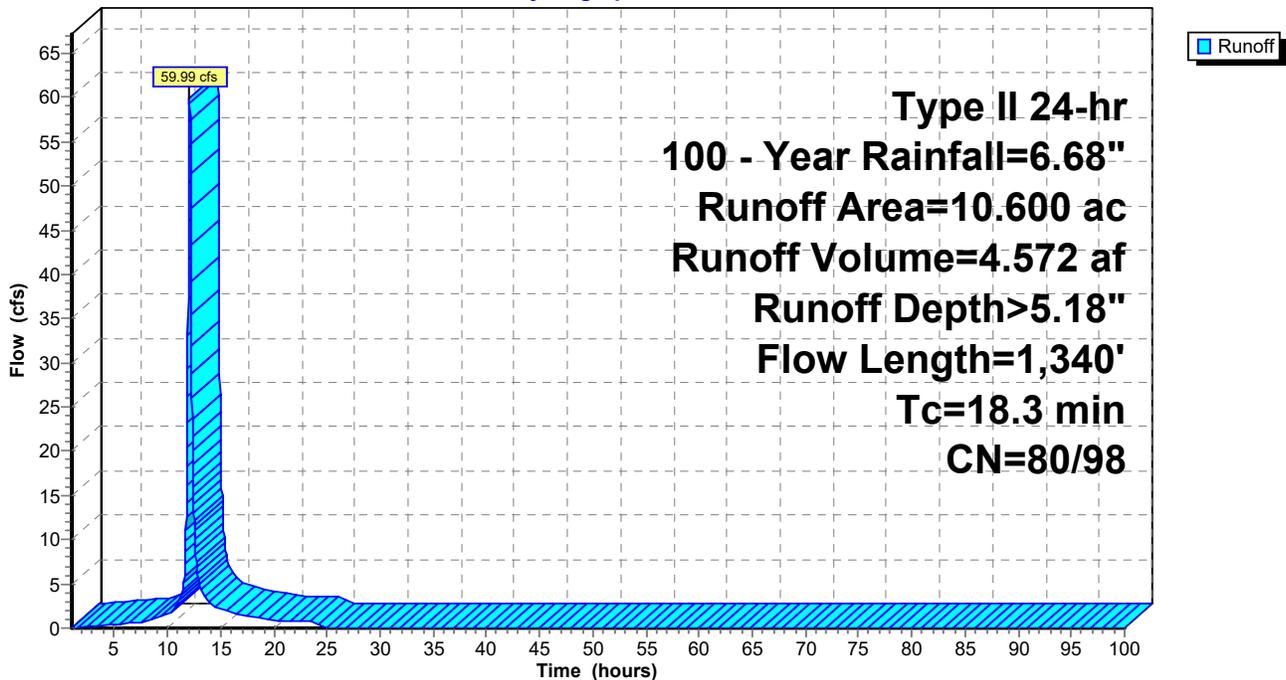
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 100 - Year Rainfall=6.68"

Area (ac)	CN	Description
10.600	87	1/4 acre lots, 38% imp, HSG D
6.572	80	62.00% Pervious Area
4.028	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
3.2	390	0.0100	2.03		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
1.1	800	0.0450	12.10	14.85	Pipe Channel, RCP_Round 15" 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
18.3	1,340	Total			

Subcatchment A2: PROPOSED SUB-BASIN A2

Hydrograph



Summary for Subcatchment A3: PROPOSED SUB-BASIN A3

[47] Hint: Peak is 282% of capacity of segment #3

[47] Hint: Peak is 191% of capacity of segment #4

Runoff = 97.70 cfs @ 12.11 hrs, Volume= 7.660 af, Depth> 5.18"
 Routed to Pond P2 : POND 2

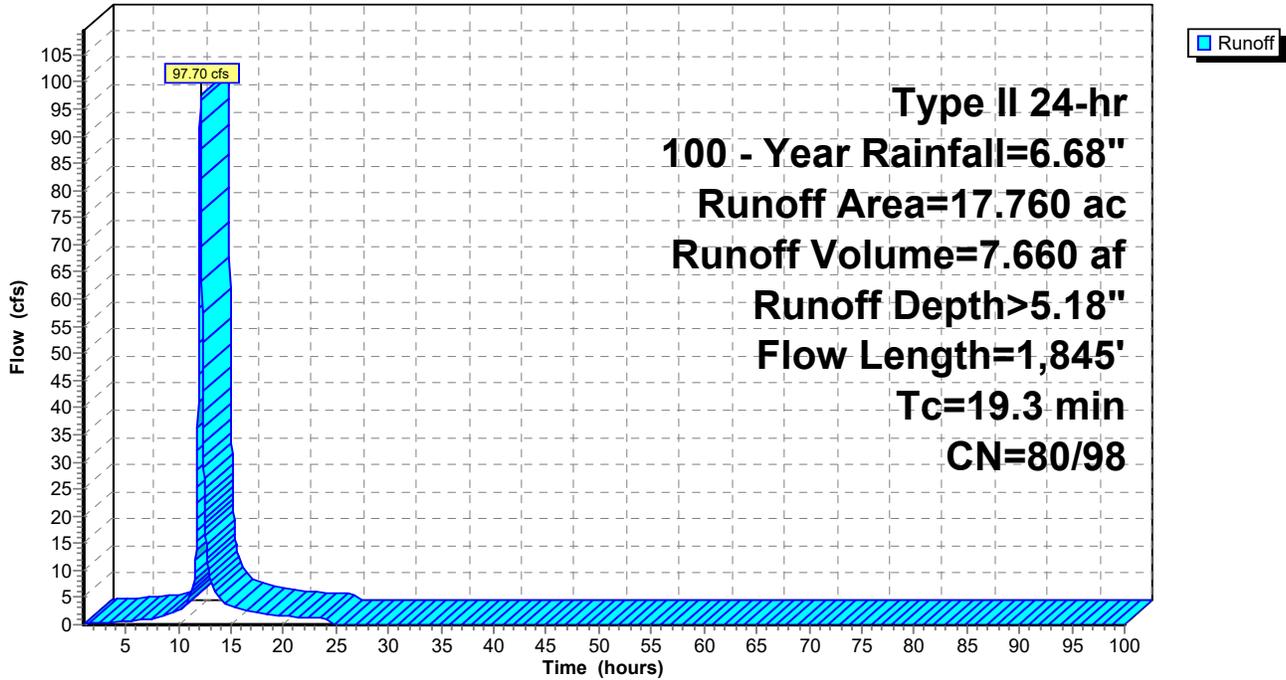
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 100 - Year Rainfall=6.68"

Area (ac)	CN	Description
17.760	87	1/4 acre lots, 38% imp, HSG D
11.011	80	62.00% Pervious Area
6.749	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
3.8	840	0.0325	3.66		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
1.0	655	0.0200	11.03	34.66	Pipe Channel, RCP_Round 24" 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 Concrete pipe, finished
0.5	200	0.0050	7.23	51.09	Pipe Channel, RCP_Round 36" 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012 Concrete pipe, finished
19.3	1,845	Total			

Subcatchment A3: PROPOSED SUB-BASIN A3

Hydrograph



Summary for Subcatchment A4: PROPOSED SUB-BASIN A4

Runoff = 18.18 cfs @ 12.00 hrs, Volume= 1.039 af, Depth> 5.18"
 Routed to Pond P2 : POND 2

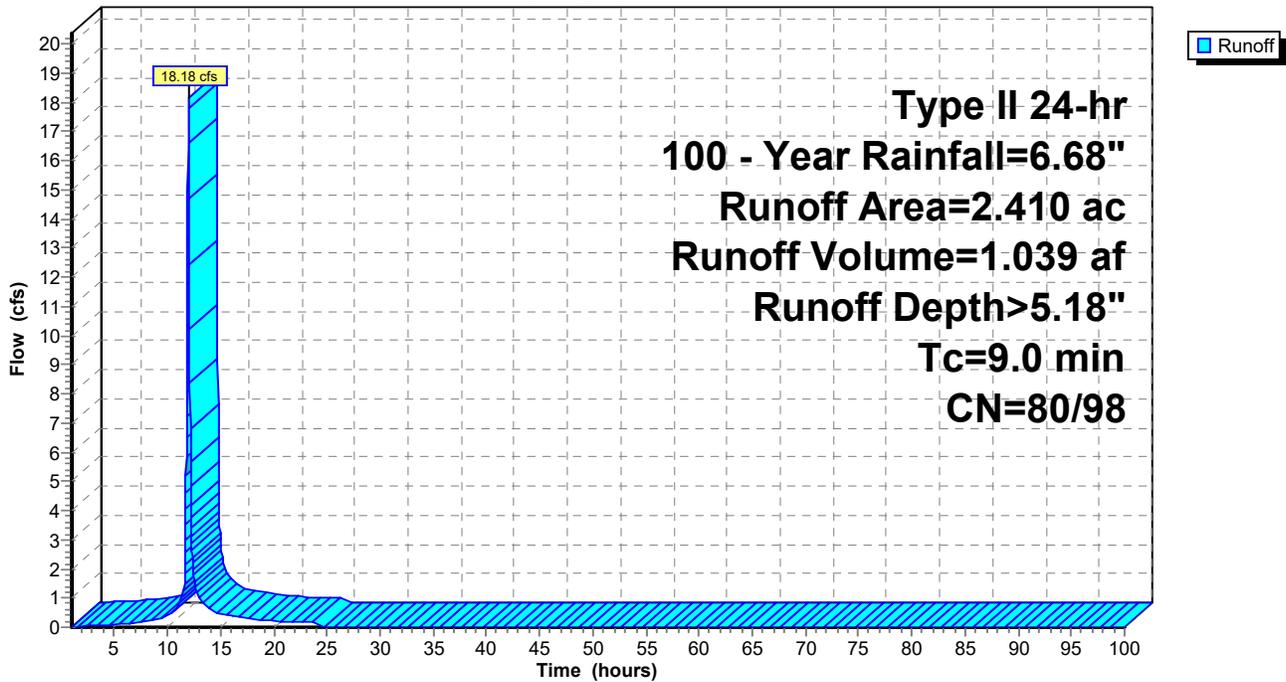
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 100 - Year Rainfall=6.68"

Area (ac)	CN	Description
2.410	87	1/4 acre lots, 38% imp, HSG D
1.494	80	62.00% Pervious Area
0.916	98	38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0					Direct Entry, direct

Subcatchment A4: PROPOSED SUB-BASIN A4

Hydrograph



Summary for Subcatchment B1: PROPOSED SUB-BASIN B1

[47] Hint: Peak is 771% of capacity of segment #3

Runoff = 38.16 cfs @ 12.11 hrs, Volume= 2.971 af, Depth> 5.23"
 Routed to Pond TP : TOTAL PROPOSED

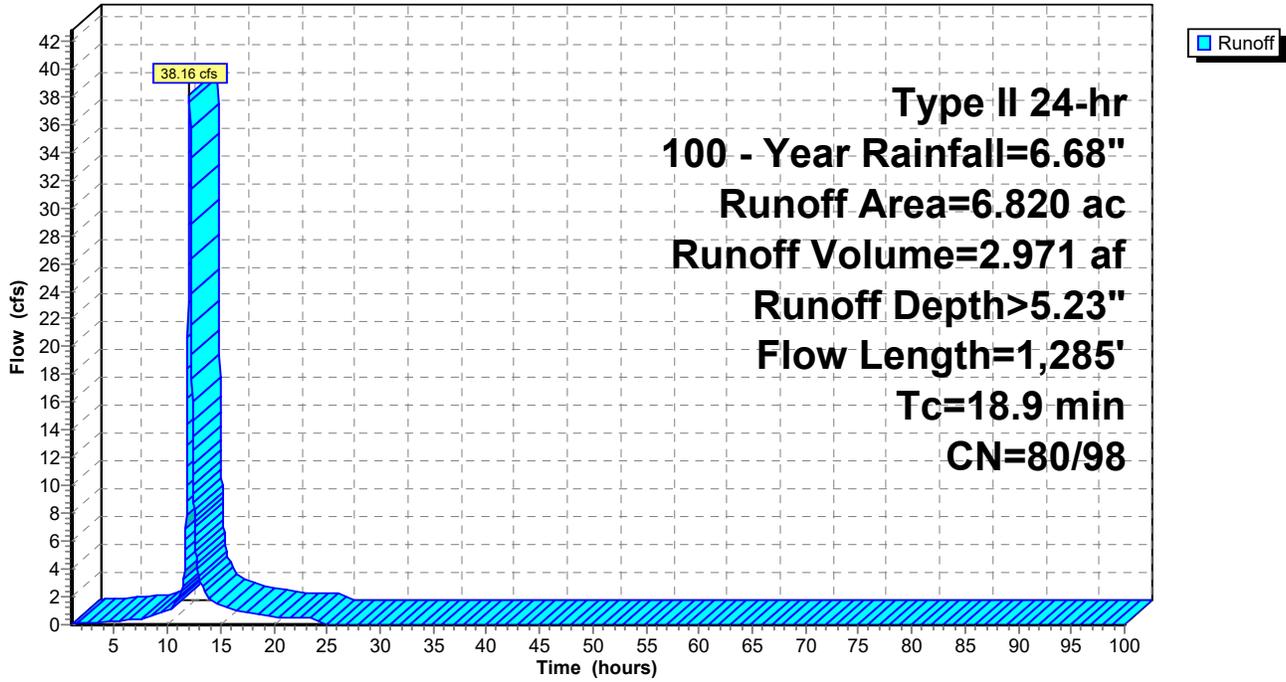
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Type II 24-hr 100 - Year Rainfall=6.68"

Area (ac)	CN	Description
0.505	98	Paved parking, HSG C
0.365	74	>75% Grass cover, Good, HSG C
5.950	87	1/4 acre lots, 38% imp, HSG D
6.820	87	Weighted Average
4.054	80	59.44% Pervious Area
2.766	98	40.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	150	0.0200	0.18		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 3.00"
1.8	385	0.0325	3.66		Shallow Concentrated Flow, SHALLOW Paved Kv= 20.3 fps
3.1	750	0.0050	4.03	4.95	Pipe Channel, RCP_Round 15" 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
18.9	1,285	Total			

Subcatchment B1: PROPOSED SUB-BASIN B1

Hydrograph



Summary for Pond P1: POND 1

Inflow Area = 25.320 ac, 38.00% Impervious, Inflow Depth > 5.18" for 100 - Year event
 Inflow = 130.53 cfs @ 12.14 hrs, Volume= 10.920 af
 Outflow = 56.17 cfs @ 12.40 hrs, Volume= 10.920 af, Atten= 57%, Lag= 15.8 min
 Primary = 56.17 cfs @ 12.40 hrs, Volume= 10.920 af
 Routed to Pond P2 : POND 2

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Peak Elev= 1,472.90' @ 12.40 hrs Surf.Area= 37,600 sf Storage= 123,555 cf

Plug-Flow detention time= 28.2 min calculated for 10.920 af (100% of inflow)
 Center-of-Mass det. time= 27.7 min (817.2 - 789.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,466.00'	223,730 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,466.00	47	0	0
1,467.00	1,629	838	838
1,468.00	8,552	5,091	5,929
1,469.00	15,452	12,002	17,931
1,470.00	22,468	18,960	36,891
1,471.00	27,518	24,993	61,884
1,472.00	32,708	30,113	91,997
1,473.00	38,157	35,433	127,429
1,474.00	44,645	41,401	168,830
1,475.00	65,155	54,900	223,730

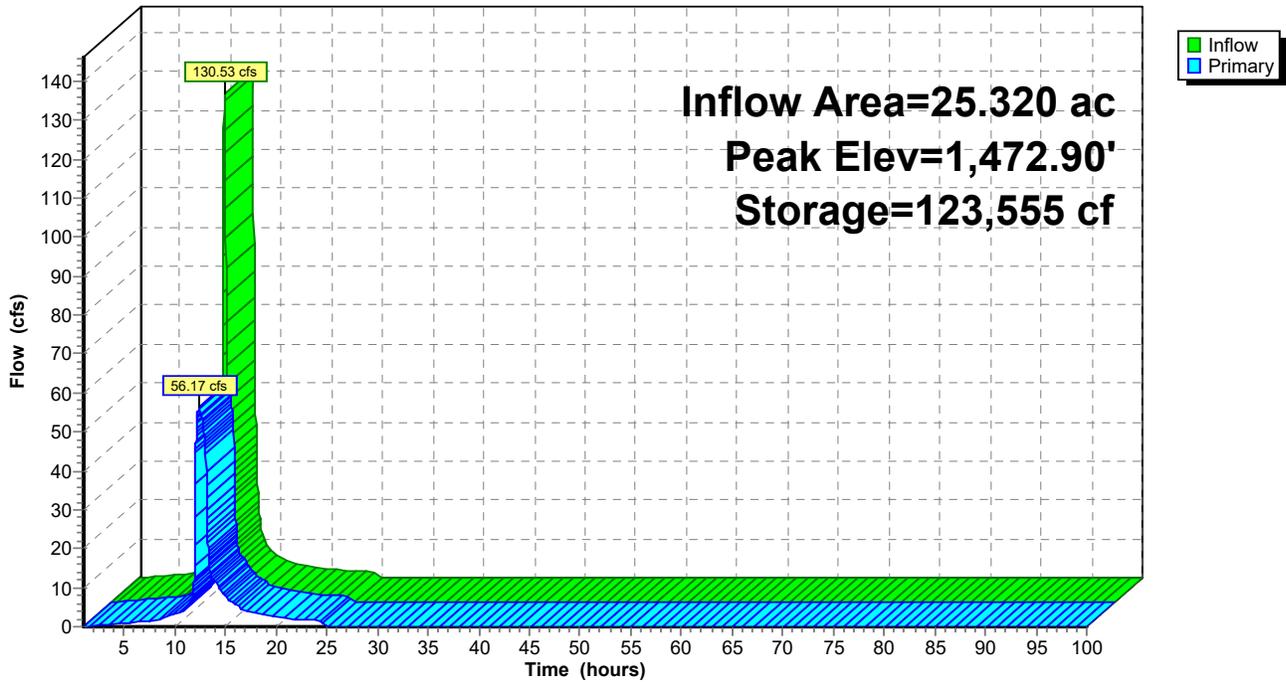
Device	Routing	Invert	Outlet Devices
#1	Primary	1,466.00'	30.0" Round RCP_Round 30" L= 300.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,466.00' / 1,462.00' S= 0.0133 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf
#2	Primary	1,474.10'	30.0' long + 4.0 ' SideZ x 60.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	1,470.00'	36.0" x 36.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	1,466.00'	6.0" W x 48.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=56.17 cfs @ 12.40 hrs HW=1,472.90' TW=1,461.44' (Dynamic Tailwater)

- 1=RCP_Round 30" (Inlet Controls 56.17 cfs @ 11.44 fps)
- 3=Orifice/Grate (Passes < 73.77 cfs potential flow)
- 4=Orifice/Grate (Passes < 21.16 cfs potential flow)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P1: POND 1

Hydrograph



Summary for Pond P2: POND 2

[44] Hint: Outlet device #4 is below defined storage

Inflow Area = 56.090 ac, 38.00% Impervious, Inflow Depth > 5.18" for 100 - Year event
 Inflow = 215.60 cfs @ 12.10 hrs, Volume= 24.191 af
 Outflow = 93.26 cfs @ 12.51 hrs, Volume= 24.191 af, Atten= 57%, Lag= 24.3 min
 Primary = 93.26 cfs @ 12.51 hrs, Volume= 24.191 af
 Routed to Pond SW : PROPOSED BASIN A

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs
 Peak Elev= 1,461.51' @ 12.51 hrs Surf.Area= 43,383 sf Storage= 185,769 cf

Plug-Flow detention time= 16.2 min calculated for 24.186 af (100% of inflow)
 Center-of-Mass det. time= 16.1 min (816.3 - 800.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,453.00'	255,649 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,453.00	626	0	0
1,454.00	4,028	2,327	2,327
1,455.00	9,182	6,605	8,932
1,456.00	14,691	11,937	20,869
1,457.00	20,468	17,580	38,448
1,458.00	26,393	23,431	61,879
1,459.00	32,062	29,228	91,106
1,460.00	36,645	34,354	125,460
1,461.00	41,061	38,853	164,313
1,462.00	45,630	43,346	207,658
1,463.00	50,351	47,991	255,649

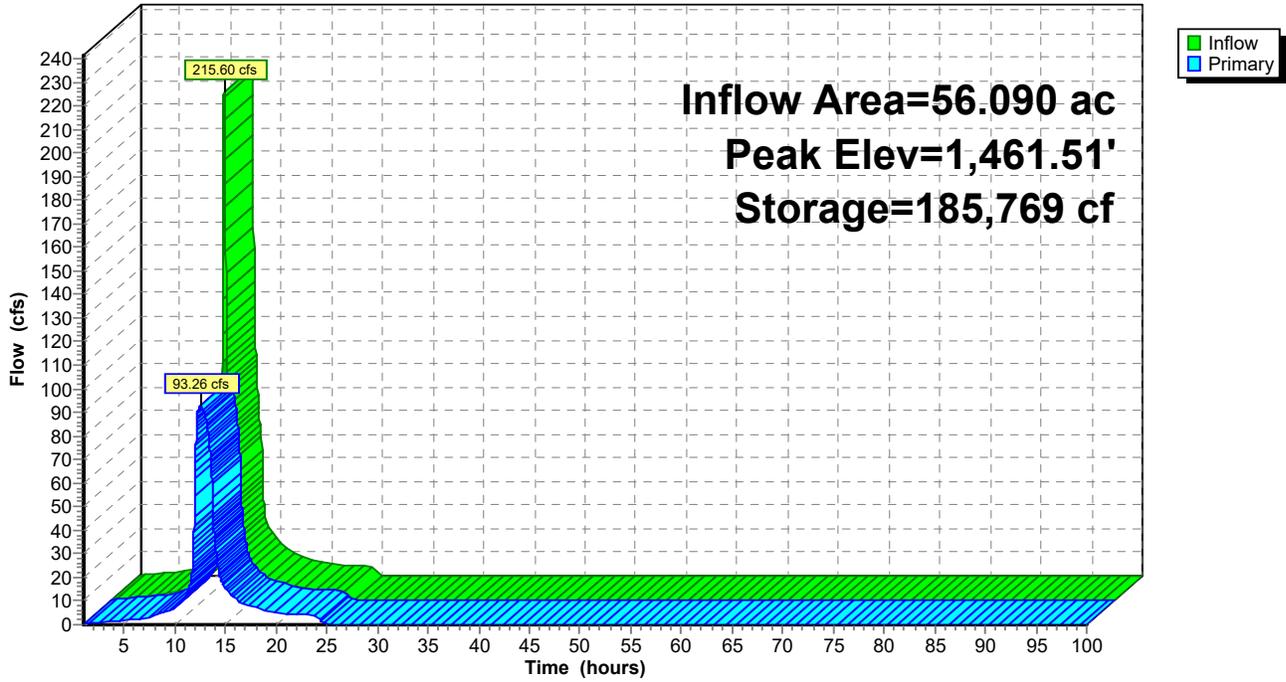
Device	Routing	Invert	Outlet Devices
#1	Primary	1,452.50'	36.0" Round RCP_Round 36" L= 95.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,452.50' / 1,452.00' S= 0.0053 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Primary	1,462.50'	35.0' long + 3.0 ' SideZ x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	1,457.00'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	1,452.50'	18.0" W x 54.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=93.26 cfs @ 12.51 hrs HW=1,461.51' TW=0.00' (Dynamic Tailwater)

- 1=RCP_Round 36" (Inlet Controls 93.26 cfs @ 13.19 fps)
- 3=Orifice/Grate (Passes < 163.57 cfs potential flow)
- 4=Orifice/Grate (Passes < 84.09 cfs potential flow)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond P2: POND 2

Hydrograph



Summary for Pond SW: PROPOSED BASIN A

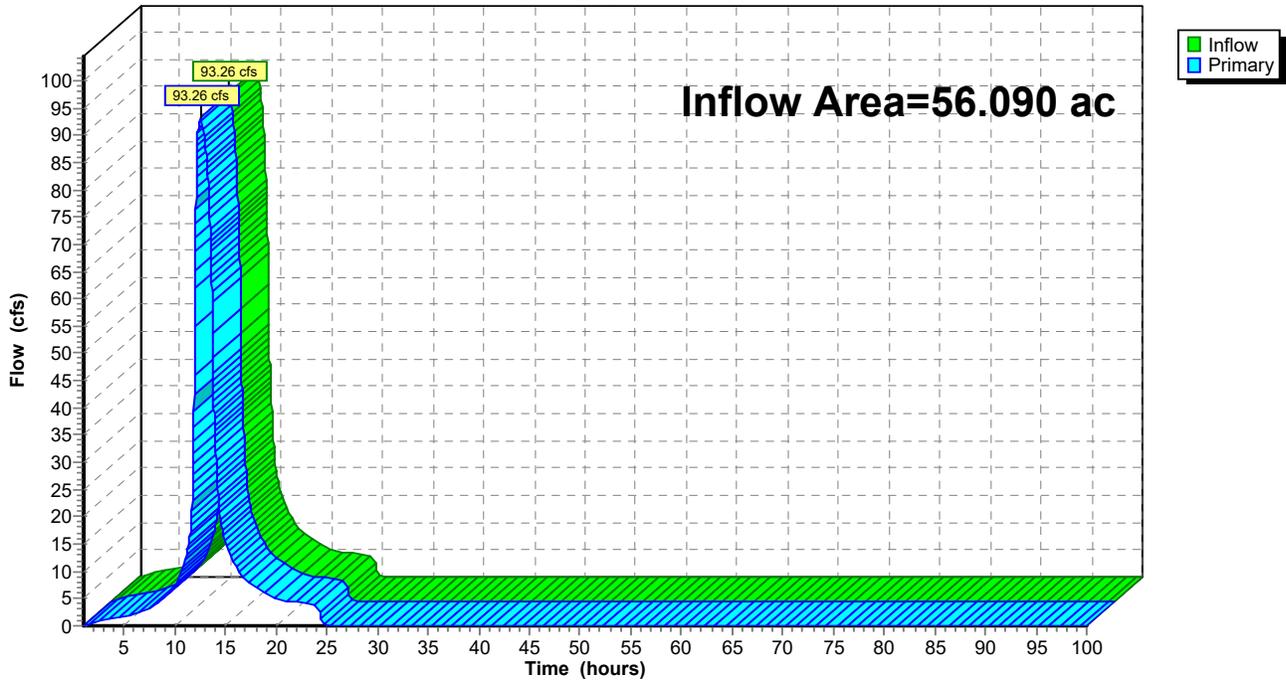
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 56.090 ac, 38.00% Impervious, Inflow Depth > 5.18" for 100 - Year event
Inflow = 93.26 cfs @ 12.51 hrs, Volume= 24.191 af
Primary = 93.26 cfs @ 12.51 hrs, Volume= 24.191 af, Atten= 0%, Lag= 0.0 min
Routed to Pond TP : TOTAL PROPOSED

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond SW: PROPOSED BASIN A

Hydrograph



Summary for Pond TP: TOTAL PROPOSED

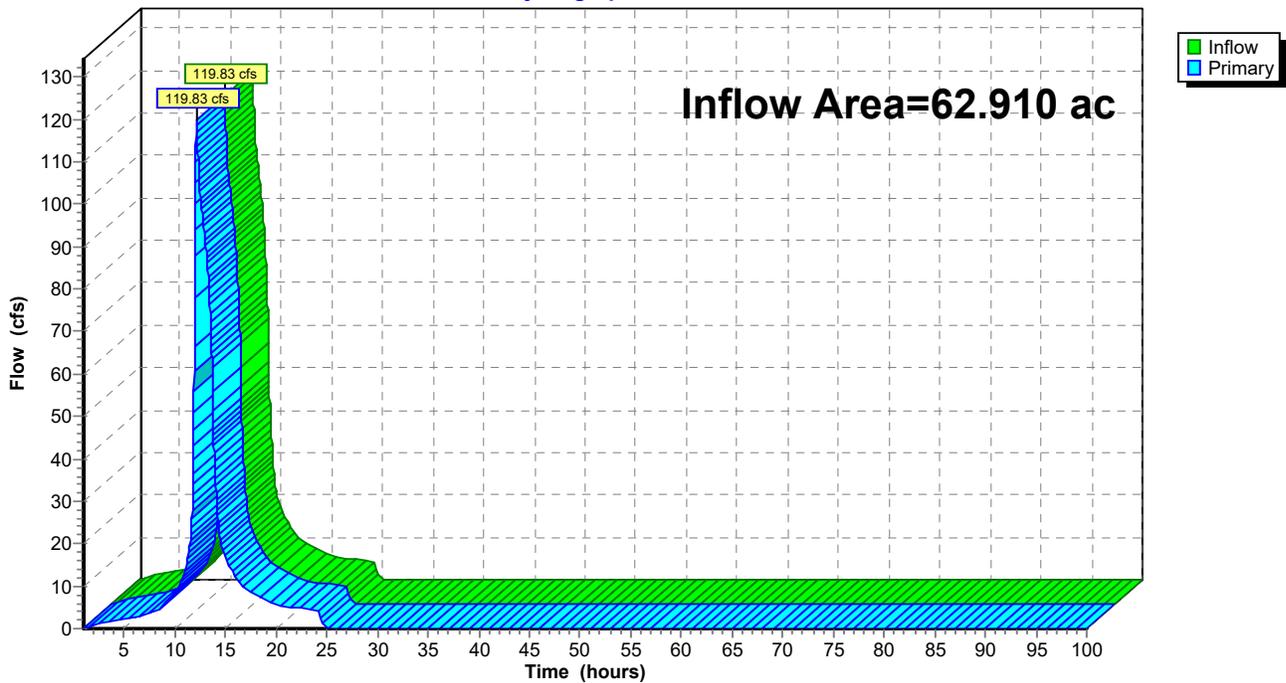
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.910 ac, 38.28% Impervious, Inflow Depth > 5.18" for 100 - Year event
Inflow = 119.83 cfs @ 12.16 hrs, Volume= 27.162 af
Primary = 119.83 cfs @ 12.16 hrs, Volume= 27.162 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-100.00 hrs, dt= 0.02 hrs

Pond TP: TOTAL PROPOSED

Hydrograph



NRCS SOILS



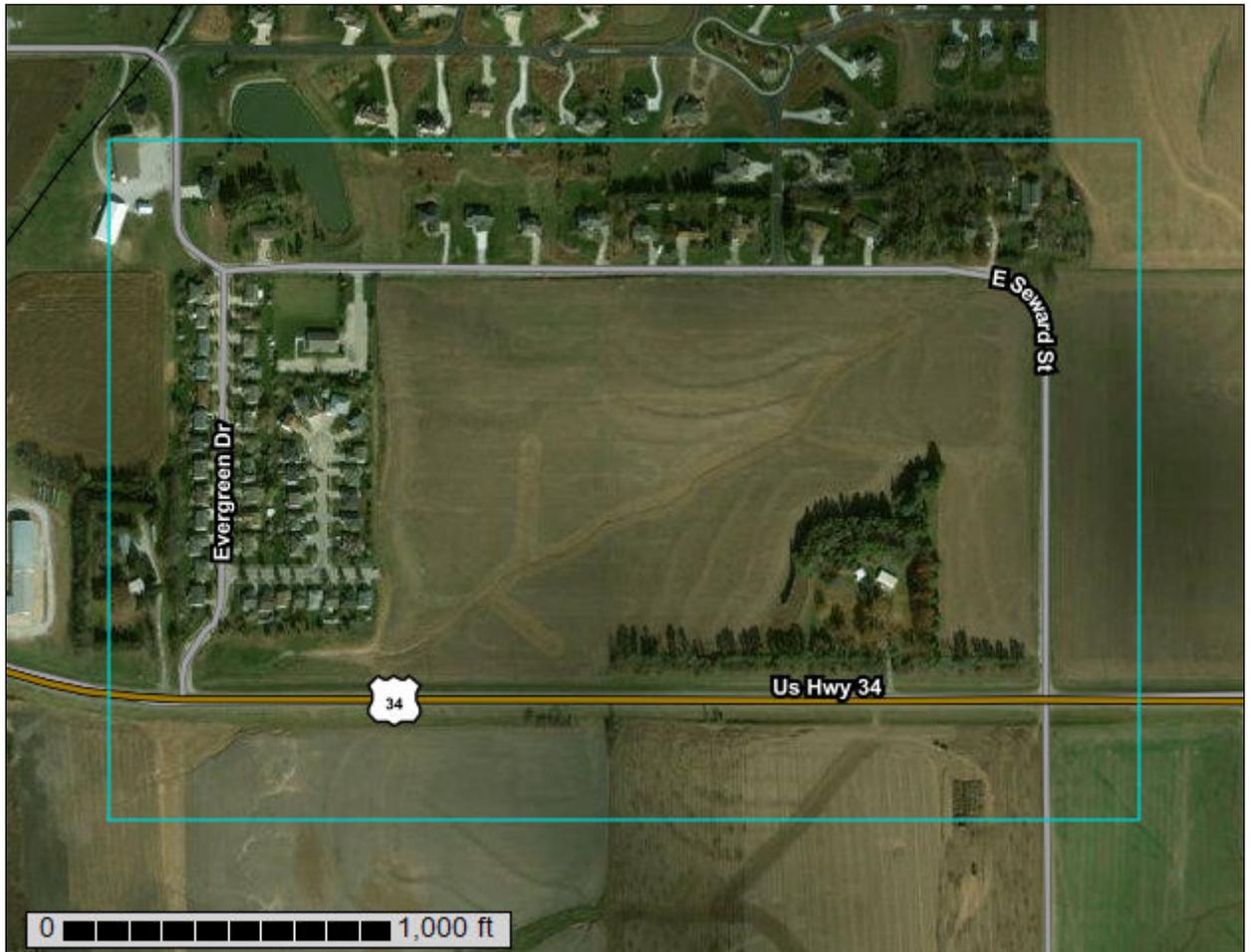
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Seward County, Nebraska**



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

Preface	2
How Soil Surveys Are Made	5
Soil Map	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	11
Map Unit Descriptions.....	11
Seward County, Nebraska.....	14
3774—Muir silty clay loam, rarely flooded.....	14
3775—Muir silt loam, rarely flooded.....	15
3776—Muir silt loam, 1 to 3 percent slopes.....	16
3840—Geary silty clay loam, 7 to 11 percent slopes, eroded.....	18
3864—Hastings silt loam, 0 to 1 percent slopes.....	20
3866—Hastings silt loam, 1 to 3 percent slopes.....	22
3870—Hastings silty clay loam, 3 to 7 percent slopes, eroded.....	24
3876—Hastings silty clay loam, 1 to 3 percent slopes, eroded.....	25
3962—Hastings silty clay loam, 7 to 11 percent slopes, eroded.....	26
3963—Hastings silty clay loam, 7 to 11 percent slopes, severely eroded...28	
7259—Deroin silty clay loam, 6 to 11 percent slopes, severely eroded.....	29
References	31

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

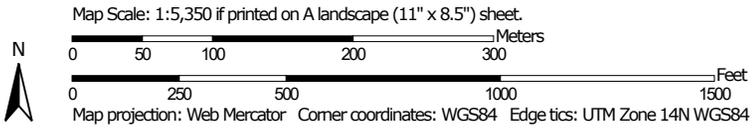
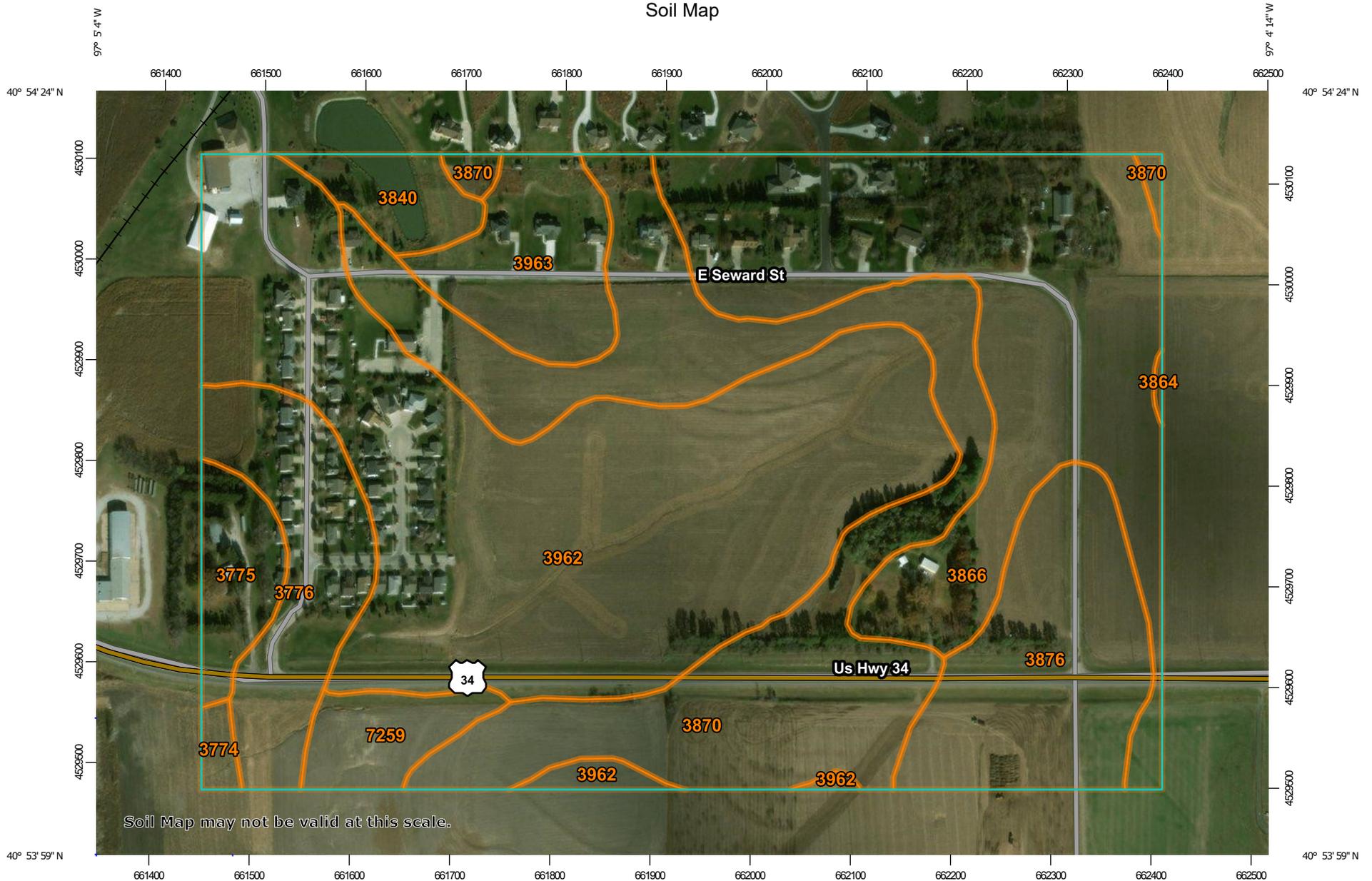
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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Seward County, Nebraska
 Survey Area Data: Version 21, Sep 14, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 16, 2011—Mar 2, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3774	Muir silty clay loam, rarely flooded	0.7	0.5%
3775	Muir silt loam, rarely flooded	3.7	2.4%
3776	Muir silt loam, 1 to 3 percent slopes	9.4	6.3%
3840	Geary silty clay loam, 7 to 11 percent slopes, eroded	3.0	2.0%
3864	Hastings silt loam, 0 to 1 percent slopes	0.1	0.1%
3866	Hastings silt loam, 1 to 3 percent slopes	30.9	20.6%
3870	Hastings silty clay loam, 3 to 7 percent slopes, eroded	31.0	20.7%
3876	Hastings silty clay loam, 1 to 3 percent slopes, eroded	13.1	8.7%
3962	Hastings silty clay loam, 7 to 11 percent slopes, eroded	47.7	31.8%
3963	Hastings silty clay loam, 7 to 11 percent slopes, severely eroded	7.1	4.7%
7259	Deroin silty clay loam, 6 to 11 percent slopes, severely eroded	3.4	2.3%
Totals for Area of Interest		150.1	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

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Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion

Custom Soil Resource Report

of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Seward County, Nebraska

3774—Muir silty clay loam, rarely flooded

Map Unit Setting

National map unit symbol: 2tpy0
Elevation: 1,130 to 2,770 feet
Mean annual precipitation: 23 to 31 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 150 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Muir, rarely flooded, and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Muir, Rarely Flooded

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

Ap - 0 to 7 inches: silty clay loam
A - 7 to 18 inches: silty clay loam
Bw1 - 18 to 36 inches: silty clay loam
Bw2 - 36 to 48 inches: silt loam
C - 48 to 79 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.6 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Ecological site: R075XY050NE - Loamy Terrace
Hydric soil rating: No

Minor Components

Hobbs, occasionally flooded

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R074XY113KS - Loamy Floodplain
Hydric soil rating: No

3775—Muir silt loam, rarely flooded

Map Unit Setting

National map unit symbol: 2tpxt
Elevation: 1,130 to 2,770 feet
Mean annual precipitation: 27 to 34 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 149 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Muir, rarely flooded, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Muir, Rarely Flooded

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

Ap - 0 to 7 inches: silt loam
A - 7 to 18 inches: silt loam
Bw1 - 18 to 36 inches: silty clay loam
Bw2 - 36 to 48 inches: silt loam
C - 48 to 79 inches: silt loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare

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Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.7 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Ecological site: R075XY050NE - Loamy Terrace
Hydric soil rating: No

Minor Components

Detroit, rarely flooded

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R075XY050NE - Loamy Terrace
Hydric soil rating: No

Hobbs, occasionally flooded

Percent of map unit: 4 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R075XY068NE - Loamy Floodplain
Hydric soil rating: No

Aquolls, occasionally ponded

Percent of map unit: 1 percent
Landform: Depressions on flood plains
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R075XY045NE - Wet Subirrigated
Hydric soil rating: Yes

3776—Muir silt loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tpxw
Elevation: 1,130 to 2,770 feet
Mean annual precipitation: 23 to 31 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 150 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Muir, rarely flooded, and similar soils: 90 percent

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Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Muir, Rarely Flooded

Setting

Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

Ap - 0 to 7 inches: silt loam
A - 7 to 18 inches: silt loam
Bw1 - 18 to 36 inches: silty clay loam
Bw2 - 36 to 48 inches: silt loam
C - 48 to 79 inches: silt loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.7 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: R075XY050NE - Loamy Terrace
Hydric soil rating: No

Minor Components

Crete

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R075XY057NE - Clayey Plains
Hydric soil rating: No

Hobbs, occasionally flooded

Percent of map unit: 4 percent
Landform: Flood plains
Down-slope shape: Concave

Custom Soil Resource Report

Across-slope shape: Linear
Ecological site: R074XY113KS - Loamy Floodplain
Hydric soil rating: No

Aquolls, occasionally ponded

Percent of map unit: 1 percent
Landform: Depressions on flood plains
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R075XY045NE - Wet Subirrigated
Hydric soil rating: Yes

3840—Geary silty clay loam, 7 to 11 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2r9d8
Elevation: 1,130 to 2,770 feet
Mean annual precipitation: 23 to 31 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 150 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Geary, eroded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Geary, Eroded

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silty clay loam
Bt1 - 6 to 22 inches: silty clay loam
Bt2 - 22 to 33 inches: silty clay loam
BC - 33 to 38 inches: silty clay loam
C - 38 to 79 inches: silt loam

Properties and qualities

Slope: 7 to 11 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Custom Soil Resource Report

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.3 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R075XY058NE - Loamy Plains
Forage suitability group: Loam (G075XY100NE)
Other vegetative classification: Loam (G075XY100NE)
Hydric soil rating: No

Minor Components

Crete

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R075XY057NE - Clayey Plains
Hydric soil rating: No

Hastings

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R075XY058NE - Loamy Plains
Hydric soil rating: No

Hobbs, occasionally flooded

Percent of map unit: 3 percent
Landform: Drainageways
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R075XY050NE - Loamy Terrace
Hydric soil rating: No

Meadin

Percent of map unit: 1 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave, linear
Across-slope shape: Linear
Ecological site: R075XY062NE - Gravelly Hills
Hydric soil rating: No

Kezan, occasionally flooded

Percent of map unit: 1 percent
Landform: Drainageways
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R075XY045NE - Wet Subirrigated
Hydric soil rating: Yes

3864—Hastings silt loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2qsjy
Elevation: 1,130 to 2,770 feet
Mean annual precipitation: 23 to 31 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 149 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hastings and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hastings

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silt loam
A - 6 to 13 inches: silty clay loam
BA - 13 to 17 inches: silty clay loam
Bt - 17 to 32 inches: silty clay loam
Bk - 32 to 39 inches: silty clay loam
C - 39 to 79 inches: silt loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Custom Soil Resource Report

Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline (0.0 to 0.8 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.5 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C
Ecological site: R075XY058NE - Loamy Plains
Forage suitability group: Loam (G075XY100NE)
Other vegetative classification: Loam (G075XY100NE)
Hydric soil rating: No

Minor Components

Crete

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R075XY057NE - Clayey Plains
Hydric soil rating: No

Butler

Percent of map unit: 4 percent
Landform: Swales
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R075XY057NE - Clayey Plains
Other vegetative classification: Wet (G075XY900NE)
Hydric soil rating: No

Fillmore, frequently ponded

Percent of map unit: 4 percent
Landform: Playas
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R075XY049NE - Closed Upland Depression
Other vegetative classification: Closed Upland Depression (G075XY910NE)
Hydric soil rating: Yes

Holder

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R075XY058NE - Loamy Plains
Other vegetative classification: Loam (G075XY100NE)

Hydric soil rating: No

3866—Hastings silt loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2qskb
Elevation: 1,130 to 2,770 feet
Mean annual precipitation: 23 to 31 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 149 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hastings and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hastings

Setting

Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silt loam
A - 6 to 11 inches: silty clay loam
BA - 11 to 14 inches: silty clay loam
Bt - 14 to 31 inches: silty clay loam
Bk - 31 to 38 inches: silty clay loam
C - 38 to 79 inches: silt loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline (0.0 to 0.8 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): 2e

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Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: R075XY058NE - Loamy Plains
Forage suitability group: Loam (G075XY100NE)
Other vegetative classification: Loam (G075XY100NE)
Hydric soil rating: No

Minor Components

Crete

Percent of map unit: 7 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R075XY057NE - Clayey Plains
Hydric soil rating: No

Butler

Percent of map unit: 4 percent
Landform: Swales
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R075XY057NE - Clayey Plains
Other vegetative classification: Wet (G075XY900NE)
Hydric soil rating: No

Holder

Percent of map unit: 2 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R075XY058NE - Loamy Plains
Other vegetative classification: Loam (G075XY100NE)
Hydric soil rating: No

Fillmore, frequently ponded

Percent of map unit: 2 percent
Landform: Playas
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R075XY049NE - Closed Upland Depression
Other vegetative classification: Closed Upland Depression (G075XY910NE)
Hydric soil rating: Yes

3870—Hastings silty clay loam, 3 to 7 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2vzkr
Elevation: 1,130 to 2,770 feet
Mean annual precipitation: 23 to 31 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 150 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hastings, eroded, and similar soils: 89 percent
Minor components: 11 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hastings, Eroded

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 8 inches: silty clay loam
BA - 8 to 14 inches: silty clay loam
Bt - 14 to 32 inches: silty clay loam
BC - 32 to 38 inches: silty clay loam
C - 38 to 79 inches: silt loam

Properties and qualities

Slope: 3 to 7 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C

Custom Soil Resource Report

Ecological site: R075XY058NE - Loamy Plains
Hydric soil rating: No

Minor Components

Geary, eroded

Percent of map unit: 7 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R075XY058NE - Loamy Plains
Hydric soil rating: No

Hobbs, frequently flooded

Percent of map unit: 3 percent
Landform: Drainageways
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R075XY068NE - Loamy Floodplain
Hydric soil rating: No

Kezan, frequently flooded

Percent of map unit: 1 percent
Landform: Drainageways
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R075XY045NE - Wet Subirrigated
Hydric soil rating: Yes

3876—Hastings silty clay loam, 1 to 3 percent slopes, eroded

Map Unit Setting

National map unit symbol: 1trvg
Elevation: 1,200 to 1,800 feet
Mean annual precipitation: 28 to 30 inches
Mean annual air temperature: 52 to 55 degrees F
Frost-free period: 160 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hastings and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hastings

Setting

Landform: Interfluves
Down-slope shape: Linear
Across-slope shape: Linear

Custom Soil Resource Report

Parent material: Loess

Typical profile

H1 - 0 to 5 inches: silty clay loam
H2 - 5 to 41 inches: silty clay loam
H3 - 41 to 60 inches: silt loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: R075XY058NE - Loamy Plains
Other vegetative classification: Silty - Veg. zone 4 (075XY075NE_2)
Hydric soil rating: No

3962—Hastings silty clay loam, 7 to 11 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2vzks
Elevation: 1,130 to 2,770 feet
Mean annual precipitation: 23 to 31 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 150 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Hastings, eroded, and similar soils: 89 percent
Minor components: 11 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hastings, Eroded

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Custom Soil Resource Report

Typical profile

Ap - 0 to 8 inches: silty clay loam
BA - 8 to 14 inches: silty clay loam
Bt - 14 to 32 inches: silty clay loam
BC - 32 to 38 inches: silty clay loam
C - 38 to 79 inches: silt loam

Properties and qualities

Slope: 7 to 11 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R075XY058NE - Loamy Plains
Hydric soil rating: No

Minor Components

Geary, eroded

Percent of map unit: 7 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R075XY058NE - Loamy Plains
Hydric soil rating: No

Hobbs, frequently flooded

Percent of map unit: 3 percent
Landform: Drainageways
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R075XY068NE - Loamy Floodplain
Hydric soil rating: No

Kezan, frequently flooded

Percent of map unit: 1 percent
Landform: Drainageways
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R075XY045NE - Wet Subirrigated
Hydric soil rating: Yes

3963—Hastings silty clay loam, 7 to 11 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: 1trvl
Elevation: 1,200 to 1,800 feet
Mean annual precipitation: 28 to 30 inches
Mean annual air temperature: 52 to 55 degrees F
Frost-free period: 160 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Hastings and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hastings

Setting

Landform: Hillslopes
Down-slope shape: Concave, convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

H1 - 0 to 4 inches: silty clay loam
H2 - 4 to 40 inches: silty clay loam
H3 - 40 to 60 inches: silt loam

Properties and qualities

Slope: 7 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R075XY058NE - Loamy Plains
Other vegetative classification: Silty - Veg. zone 4 (075XY075NE_2)
Hydric soil rating: No

7259—Deroin silty clay loam, 6 to 11 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: 1trv0
Elevation: 1,200 to 1,800 feet
Mean annual precipitation: 28 to 30 inches
Mean annual air temperature: 52 to 55 degrees F
Frost-free period: 160 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Deroin, eroded, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Deroin, Eroded

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Concave, convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

H1 - 0 to 6 inches: silty clay loam
H2 - 6 to 34 inches: silty clay loam
H3 - 34 to 60 inches: silty clay loam

Properties and qualities

Slope: 7 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: High (about 11.3 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: R106XY075NE - Loamy Upland
Forage suitability group: Loam (G106XY100NE)
Other vegetative classification: Loam (G106XY100NE)
Hydric soil rating: No

Custom Soil Resource Report

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Custom Soil Resource Report

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City of Seward Planning Commission
142 N 7th St, Seward, NE 68434

Staff Report

Tim Dworak, Building/Zoning &
Code Enforcement Director

402-643-2928 opt 3 opt 1

APPLICATION TYPE

FINAL ACTION?

DEVELOPER/OWNER

Major Subdivision Application
Preliminary Plat

1640 LLC, Bob Benes

PC HEARING DATE

RELATED APPLICATIONS

PROPERTY ADDRESS, ZONING DISTRICT/USE

February 28, 2022

R-3 / Residential

ADJACENT ZONING DISTRICTS/USE:

North, R-3, Urban Residential Mixed-Density – Dale & Connie Rood, Bruce & Kendra Scheiber, Doug & Gail Brand, Samuel & Rachel Sommerer, Kenton & Christina Schegg, Nicholas & Jennifer Hiser, James & Ellen Varney, Brett & Noel Baker, April Hoffbauer, Thomas & Vickie Jorgensen, Kenneth & Nancy Lieb, Ridge Run Addition

East, AG, Agriculture – Jones Farms Inc

South, R-4, Urban Residential Multifamily – Jones Farm Inc

West, R-3, Urban Residential Mixed-Density – Church of Jesus Christ of Latter Day Saints, Christopher & Lori Read, Matthew & Michelle Folken, Kenneth & Patricia Hackel, Richard & Valorie Snow, Larry & Stephany Canning, Richard & Catherine Skoda, Valley View Estates 3rd Addition

BRIEF SUMMARY OF REQUEST:

A Major Subdivision preliminary plat review of Prairie View Addition.



APPLICATION CONTACT

Bob Benes, Office: 402-423-6811
1640 Normandy Ct A, Lincoln, NE 68512

COMPATIBILITY WITH THE COMPREHENSIVE PLAN

Use type matches the comprehensive plan.

ANALYSIS

This is a Major Subdivision Preliminary Plat application to develop a tract of land east of Valley View Estates Addition, South of Ridge Run Addition, and North of Highway 34.

The applicant is 1640, LLC, Bob Benes, and the professional design firm is Olsson, Inc. This will be the second subdivision that Mr. Benes will construct in Seward. Mr. Benes, has constructed multiple subdivisions in Lincoln and other Municipalities.

This subdivision involves 170 single family residential lots, with five additional outlots. The subject property is currently located partly inside and partly outside of the City limits, they are aware and receptive to annexation. The property is zoned R-3 Urban Residential District (Mixed Density) with all lot sizes conforming to the R-3 minimum lot width and square footage requirements. The construction is set to be done in seven phases with the grading for the first three phases to begin immediately upon approvals. Time frames for the stages is subject to demand and economic conditions.

The subdivision will involve extending City utilities and new public streets connecting to Willow Ave. in the Valley View Estates Addition, East Seward Street to the north, and Prairie Flower Road to the east. Bob, Olsson, Inc., and City staff have met to review the Preliminary Subdivision Plat to assure city requirements meet the respective utility's needs.

Olsson, Inc's. staff and City staff have met multiple times to research the drainage of storm water from the Prairie View subdivision and to work on designing the storm water management system for this area. Bob met with the Valley View Estates HOA to discuss the option of incorporating the detention cell to the south of the Valley View subdivision with the drainage for Prairie View subdivision and to clean up and maintain the existing cell.

The City's Unified Land Development Ordinance, §410-41.5 Parks and public facilities reads in part; "...a subdivision shall dedicate for a neighborhood park 0.006 acres per single-family detached dwelling unit....". The amount of land required is; $170 \text{ lots} \times .006 \text{ acres} = 1.02 \text{ acres}$. Prairie View has allotted; 1.23 acres (Outlots D and E).

A public hearing notice was published, mailed to neighboring property owners, and the property was posted.

APPROXIMATE LAND AREA:

59.42 acres or 2,588,457.27 square feet +/-

LEGAL DESCRIPTION:

A TRACT OF LAND COMPOSED OF A PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER AND A PORTION THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 22, TOWNSHIP 11 NORTH, RANGE 3 EAST OF THE 6TH P.M., SEWARD COUNTY, NEBRASKA, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

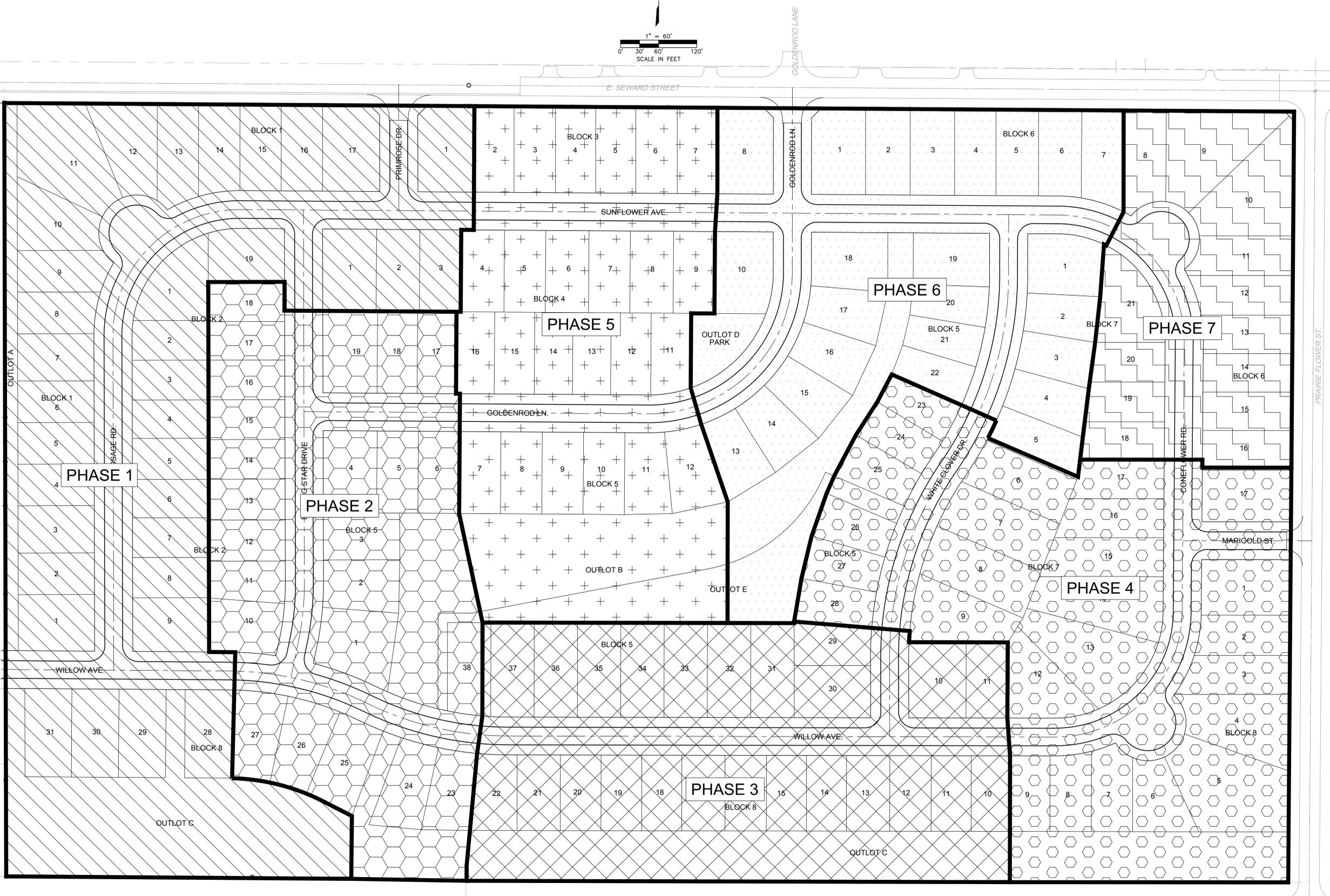
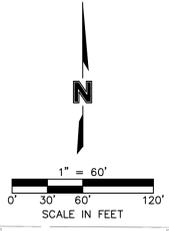
BEGINNING AT THE NORTHEAST CORNER OF SAID SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER, SAID POINT BEING THE TRUE POINT OF BEGINNING; THENCE $S00^{\circ}26'06''W$, ON THE EAST LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 1,256.08' TO A POINT ON THE NORTH RIGHT OF WAY LINE OF STATE HIGHWAY 34; THENCE $N89^{\circ}53'36''W$, ON THE NORTH LINE OF SAID RIGHT OF WAY, A DISTANCE OF 1,324.47' TO A POINT ON THE WEST LINE SAID SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER, SAID POINT BEING ON THE NORTH LINE OF SAID RIGHT OF WAY; THENCE $N88^{\circ}59'50''W$, ON A NORTH LINE OF SAID RIGHT OF WAY, A DISTANCE OF 337.49' TO A POINT ON THE NORTH LINE OF SAID RIGHT OF WAY; THENCE $N89^{\circ}49'00''W$, ON A NORTH LINE OF SAID RIGHT OF WAY, A DISTANCE OF 386.78' TO A POINT ON THE WEST LINE OF SAID DESCRIBED TRACT LOCATED IN A PORTION OF SOUTHWEST QUARTER OF SOUTHWEST QUARTER, SAID POINT BEING ON THE EAST LINE OF OUTLOT "A" SEWARD VALLEY VIEW ESTATES 3RD ADDITION, SAID POINT BEING ON THE NORTH LINE OF SAID RIGHT OF WAY; THENCE $N00^{\circ}08'31''W$, ON THE WEST LINE OF SAID SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER, SAID LINE BEING THE EAST LINE OF SAID SEWARD VALLEY VIEW ESTATES 3RD ADDITION AND AN EAST LINE OF LOT 1, BLOCK 1, SEWARD VALLEY ESTATES 2ND ADDITION AND ITS EXTENSION, A DISTANCE OF 1,260.26' TO A POINT ON THE NORTH LINE OF SAID SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER; THENCE $S89^{\circ}36'55''E$, ON THE NORTH LINE OF SAID SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER, A DISTANCE OF 730.37' TO THE NORTHEAST CORNER OF SAID SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER, SAID POINT BEING THE NORTHWEST CORNER OF SAID SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER; THENCE $S89^{\circ}36'57''E$, ON THE NORTH LINE OF SAID SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER, A DISTANCE OF 1,331.02', TO THE POINT OF BEGINNING, SAID TRACT CONTAINS A CALCULATED AREA OF 2,588,457.27 SQUARE FEET OR 59.42 ACRES, MORE OR LESS.(PID's 800039432, 800039440)

Prepared by

Tim Dworak

City of Seward Building - Zoning - Code Enforcement Director

PRAIRIE VIEW
PRELIMINARY PLAT
CONCEPTUAL PHASING PLAN



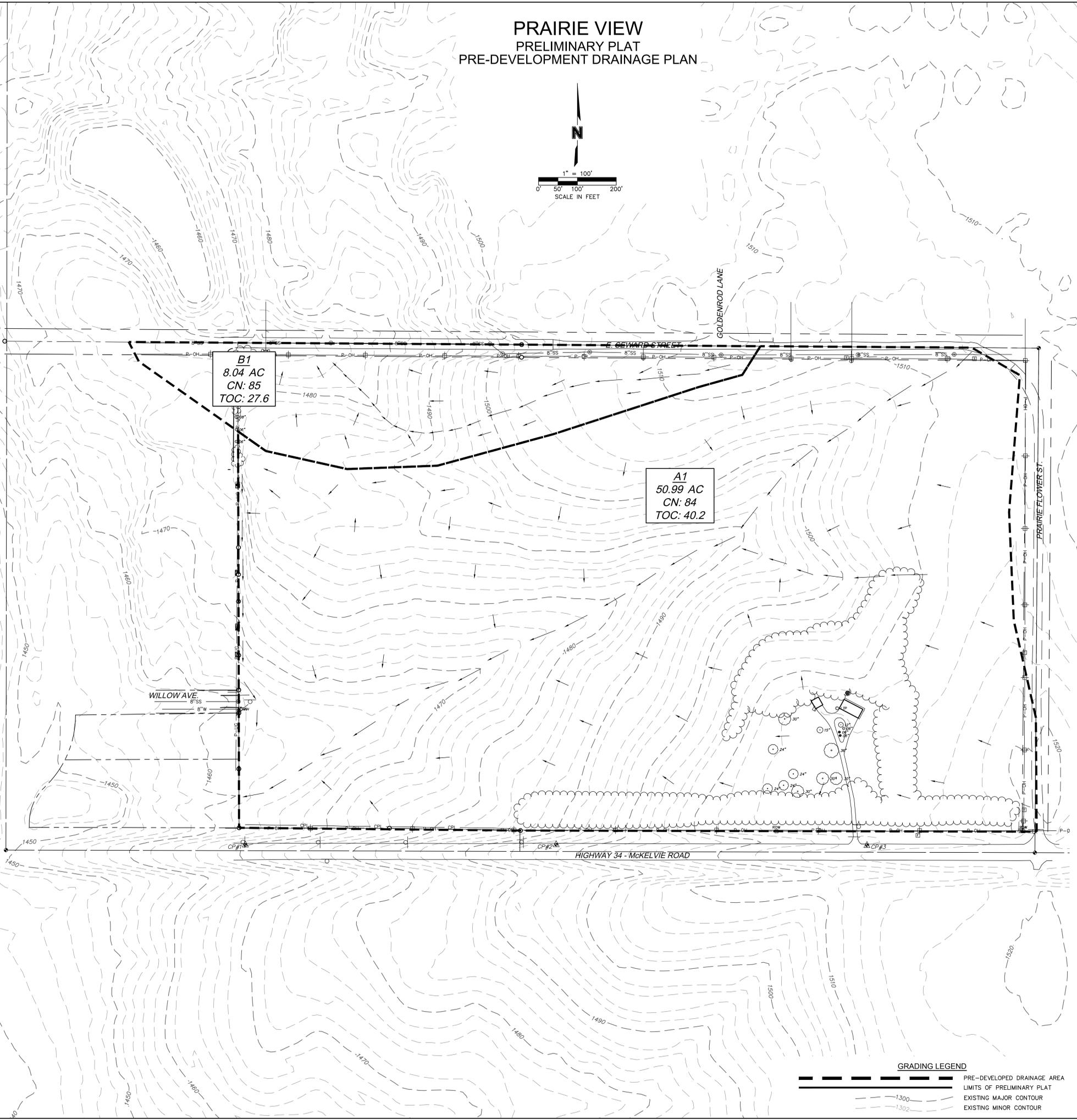
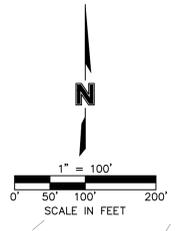
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REV. NO.	DATE	REVISIONS DESCRIPTION

REV. NO.	DATE	REVISIONS DESCRIPTION

CONCEPTUAL PHASING PLAN
 PRAIRIE VIEW
 PRELIMINARY PLAT
 SEWARD, NEBRASKA
 2022

PRAIRIE VIEW
PRELIMINARY PLAT
PRE-DEVELOPMENT DRAINAGE PLAN



EXISTING CONDITIONS		
	SUB-BASIN A	SUB-BASIN B
RETURN PERIOD (YEAR)	PEAK FLOW (CFS)	PEAK FLOW (CFS)
2	55.1	11.6
5	84.4	17.5
10	109.1	22.4
50	152.2	31.0
100	174.8	35.5

LEGEND

- CONTROL POINT
- CONIFEROUS TREE
- DECIDUOUS TREE
- FIRE HYDRANT
- FIBER OPTIC BOX
- FOUND REBAR
- GUY WIRE
- LIGHT POLE
- POWER POLE
- RIGHT-OF-WAY MARKER
- SECTION CORNER
- SET REBAR
- SIGN
- SANITARY SEWER MANHOLE
- TELEPHONE RISER
- TRANSFORMER
- WATER WELL
- WATER VALVE
- CONTOUR LINE
- CENTER LINE
- PROPERTY LINE
- SECTION LINE
- EASEMENT LINE
- SANITARY SEWER LINE
- STORM SEWER LINE
- WATER LINE
- UNDERGROUND GAS MAIN
- OVERHEAD POWER
- UNDERGROUND POWER
- CROP LINE
- TREE MASS/BUSHES

GRADING LEGEND

- PRE-DEVELOPED DRAINAGE AREA
- LIMITS OF PRELIMINARY PLAT
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

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olsson
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Lincoln, NE 68508
TEL 402.474.6311 www.olsson.com

PRE-DEVELOPMENT DRAINAGE PLAN

PRAIRIE VIEW
PRELIMINARY PLAT

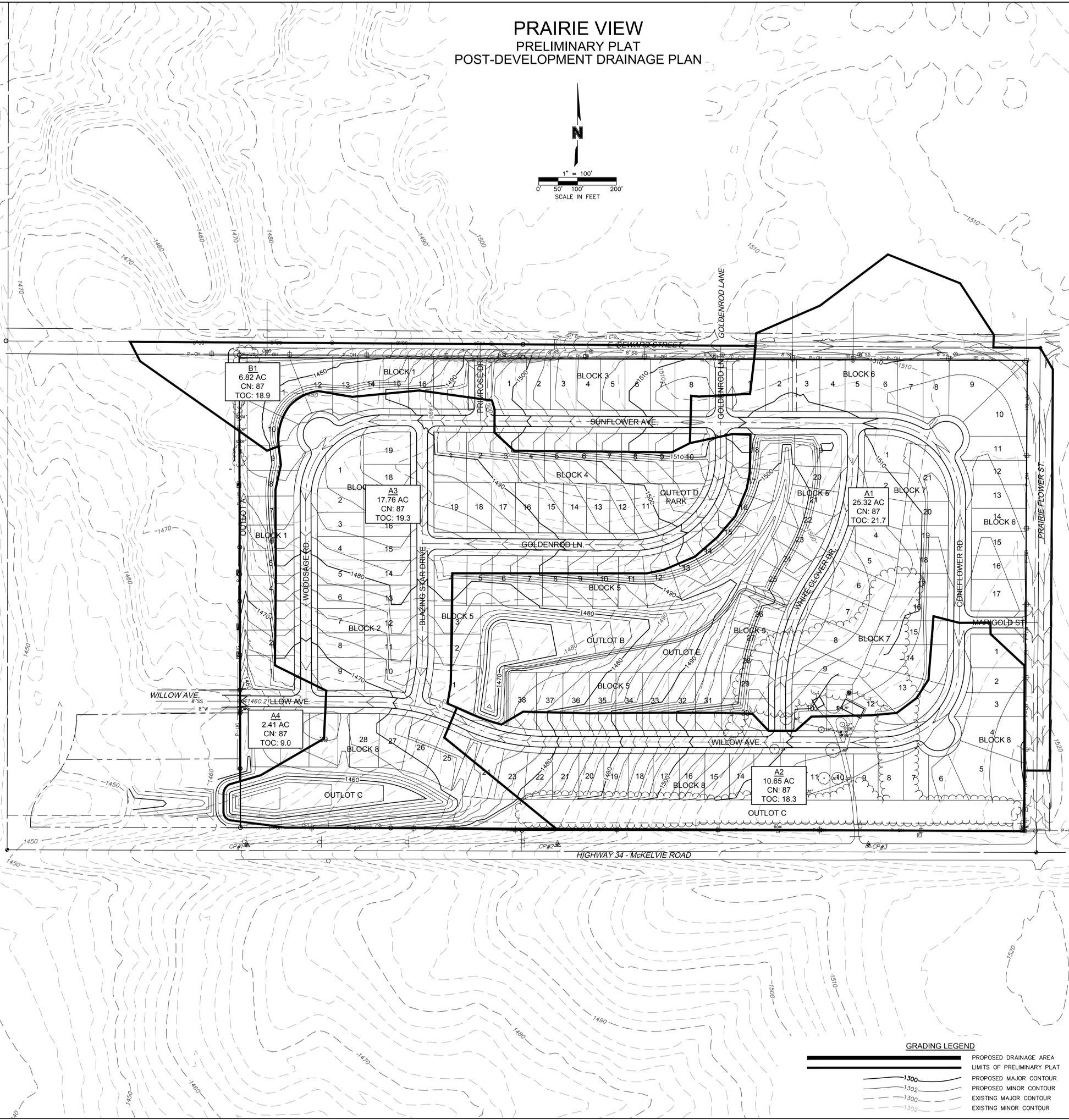
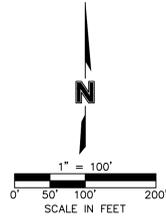
SEWARD, NEBRASKA

REV. NO.	DATE	REVISIONS DESCRIPTION

2022

SHEET
5 of 13

PRAIRIE VIEW
PRELIMINARY PLAT
POST-DEVELOPMENT DRAINAGE PLAN



PROPOSED CONDITIONS		
RETURN PERIOD (YEAR)	SUB-BASIN A	SUB-BASIN B
	PEAK FLOW (CFS)	PEAK FLOW (CFS)
2	46.5	13.6
5	70.3	19.6
10	78.1	24.7
50	88.6	33.5
100	93.3	38.2

- LEGEND**
- CONTROL POINT
 - CONIFEROUS TREE
 - DECIDUOUS TREE
 - FIRE HYDRANT
 - FIBER OPTIC BOX
 - FOUND REBAR
 - GUY WIRE
 - LIGHT POLE
 - POWER POLE
 - RIGHT-OF-WAY MARKER
 - SECTION CORNER
 - SET REBAR
 - SIGN
 - SANITARY SEWER MANHOLE
 - TELEPHONE RISER
 - TRANSFORMER
 - WATER WELL
 - WATER VALVE
 - CONTOUR LINE
 - CENTER LINE
 - PROPERTY LINE
 - SECTION LINE
 - EASEMENT LINE
 - SANITARY SEWER LINE
 - STORM SEWER LINE
 - WATER LINE
 - UNDERGROUND GAS MAIN
 - OVERHEAD POWER
 - UNDERGROUND POWER
 - CROP LINE
 - TREE MASS/BUSHES

- GRADING LEGEND**
- LIMITS OF PRELIMINARY PLAT
 - PROPOSED MAJOR CONTOUR
 - PROPOSED MINOR CONTOUR
 - EXISTING MAJOR CONTOUR
 - EXISTING MINOR CONTOUR

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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION

POST-DEVELOPMENT DRAINAGE PLAN

PRAIRIE VIEW
PRELIMINARY PLAT

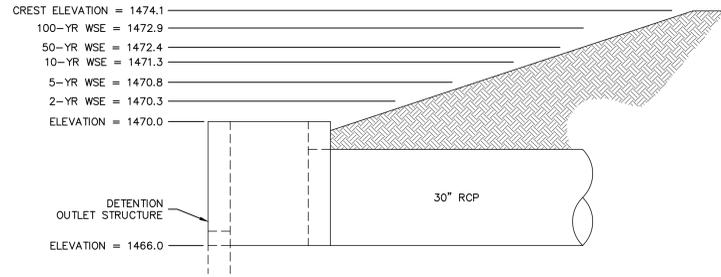
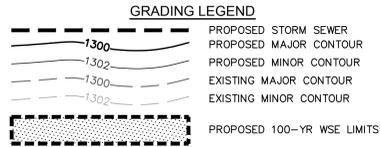
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SEWARD, NEBRASKA

SHEET
6 of 13

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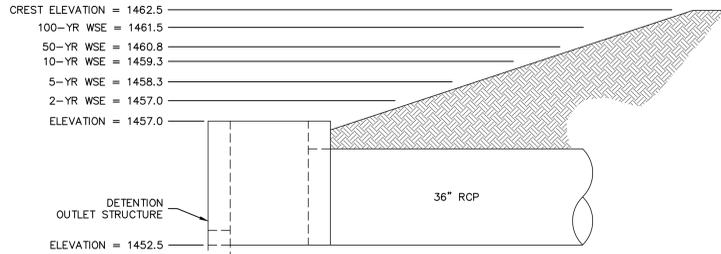
PRAIRIE VIEW PRELIMINARY PLAT POND DETAILS



PROPOSED DETENTION POND 1

RETURN PERIOD (YEAR)	PEAK FLOW IN (CFS)	PEAK FLOW OUT (CFS)	VOLUME (AC-FT)	STAGE (FEET)	POOL ELEVATION (FEET)
2	45.9	21.7	1.0	4.3	1470.33
5	66.6	43.9	1.3	4.8	1470.80
10	84.0	47.7	1.6	5.3	1471.31
50	114.5	53.4	2.4	6.4	1472.36
100	130.5	56.2	2.8	6.9	1472.90

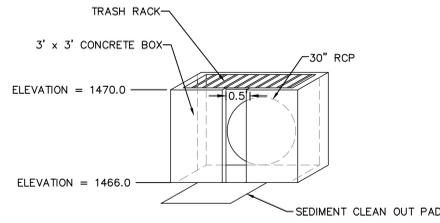
POND 1 OUTLET DETAIL
PROFILE VIEW
NOT TO SCALE



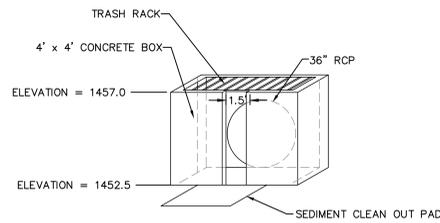
PROPOSED DETENTION POND 2

RETURN PERIOD (YEAR)	PEAK FLOW IN (CFS)	PEAK FLOW OUT (CFS)	VOLUME (AC-FT)	STAGE (FEET)	POOL ELEVATION (FEET)
2	68.9	46.5	0.9	4.5	1457.02
5	104.2	70.3	1.6	5.8	1458.27
10	144.3	78.1	2.3	6.8	1459.27
50	193.3	88.6	3.6	8.3	1460.78
100	215.6	93.3	4.3	9.0	1461.51

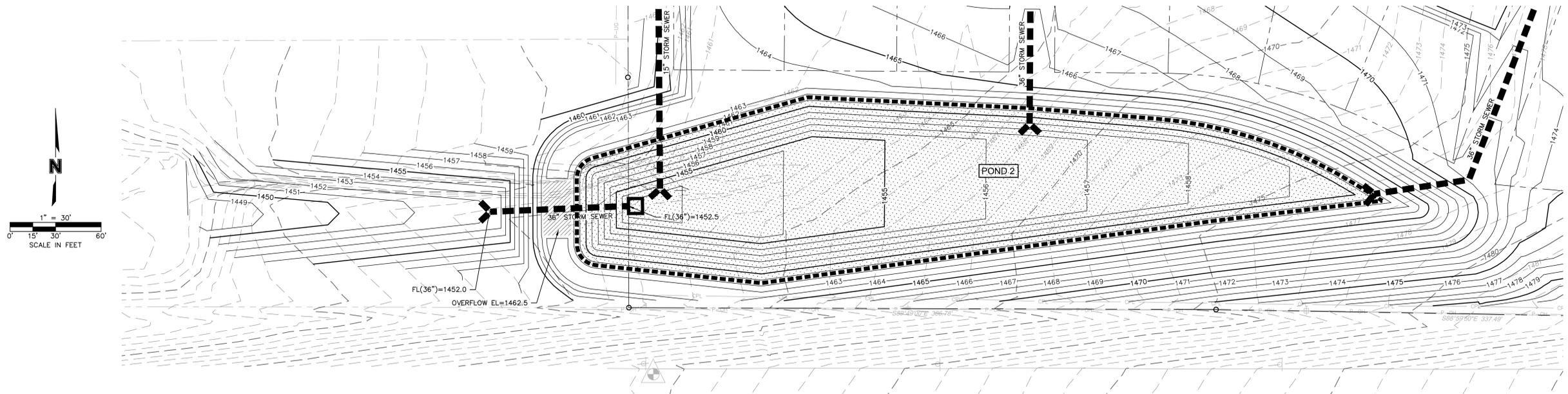
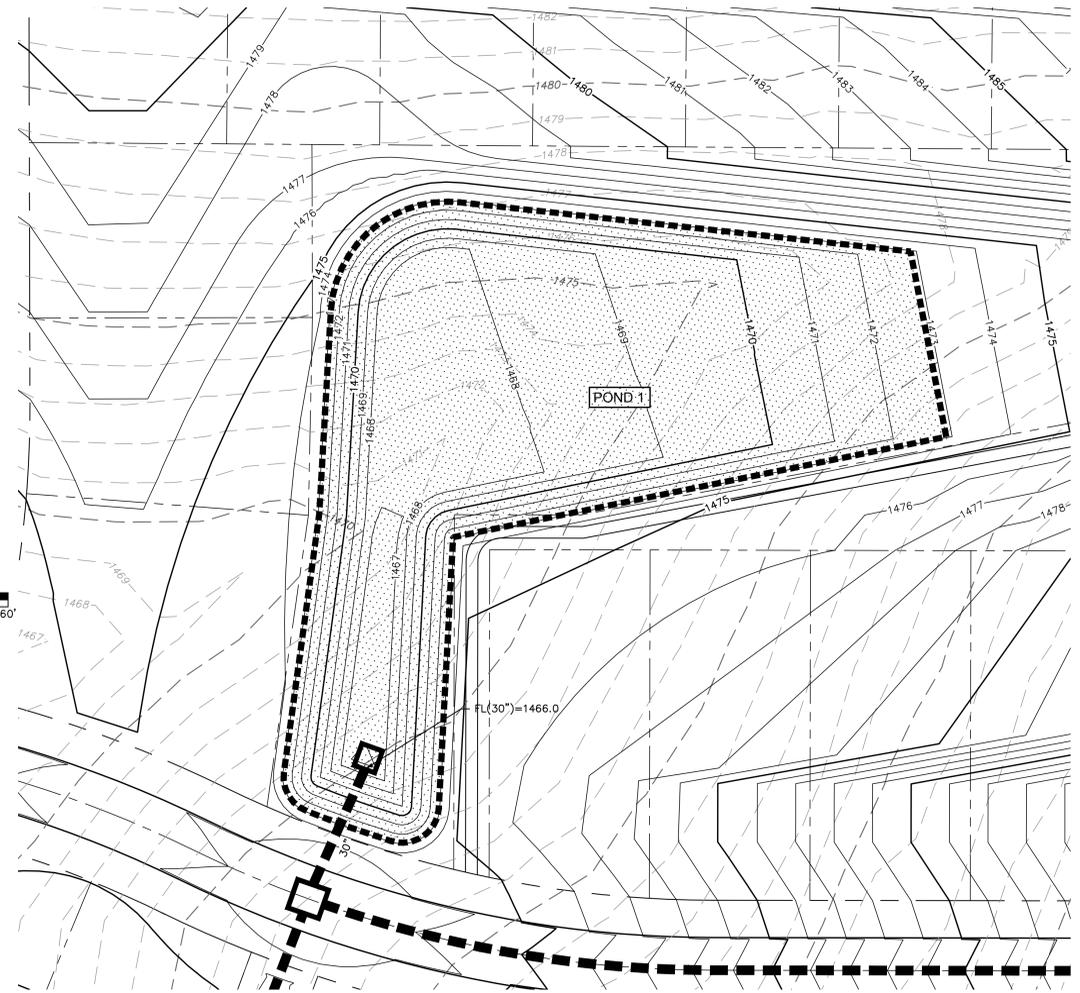
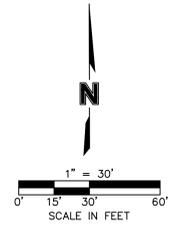
POND 2 OUTLET DETAIL
PROFILE VIEW
NOT TO SCALE



POND 1 DETENTION OUTLET STRUCTURE DETAIL
ISOMETRIC VIEW
NOT TO SCALE



POND 2 DETENTION OUTLET STRUCTURE DETAIL
ISOMETRIC VIEW
NOT TO SCALE



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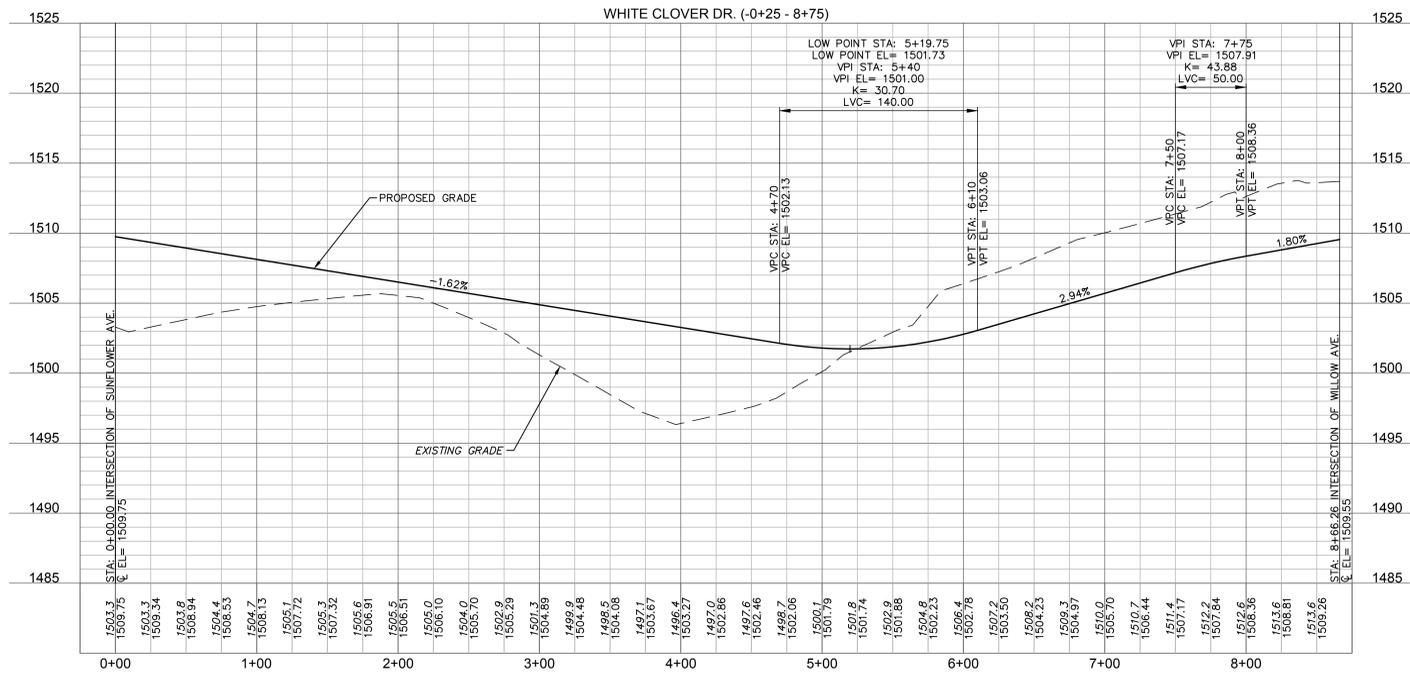
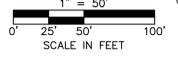
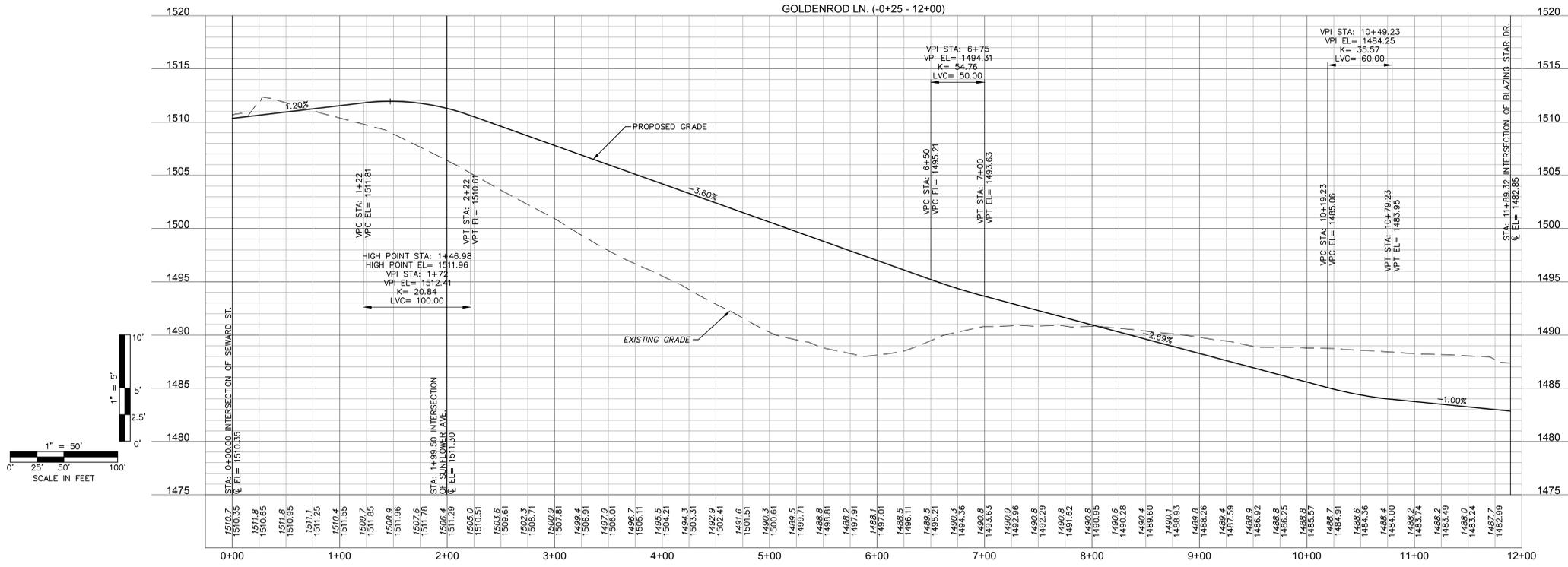
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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION

POND DETAILS
 PRAIRIE VIEW
 PRELIMINARY PLAT
 SEWARD, NEBRASKA
 2022
 drawn by: KBT
 checked by: EAP
 approved by: BFB
 GACD by: JXX
 project no.: 021-04805
 drawing no.:
 date: 2/25/2022
SHEET
 9 of 13

PRAIRIE VIEW PRELIMINARY PLAT ROADWAY PROFILES



REV. NO.	DATE	REVISIONS DESCRIPTION

REV. NO.	DATE	REVISIONS DESCRIPTION

drawn by:	KRT
checked by:	EAP
approved by:	BPS
date:	2/25/2022

After recording please return to:

SUBDIVISION AGREEMENT

THIS AGREEMENT is made and entered into by and between 1640 LLC, a Nebraska limited liability company (referred to hereafter as the "Subdivider"), and the City of Seward, Nebraska, a municipal corporation (the "City").

WHEREAS, Subdivider has made application to City for permission to subdivide and for approval of the final plat of Prairie View Addition, a copy of which is attached to this Agreement as Exhibit 'A' (the "Final Plat" or "Subdivision"); and

WHEREAS, the Final Plat contains certain provisions requiring an agreement between Subdivider and City relating to the Final Plat and the development thereof.

NOW, THEREFORE, IN CONSIDERATION of the City granting permission to plat and approval of the Final Plat of Prairie View Addition, it is agreed by and between Subdivider and City as follows:

1. **Sanitary Sewer.** The Subdivider agrees to design and install sanitary sewer lines within or adjacent to said Subdivision per City approved plans and specifications. All costs for said sanitary sewer facilities shall be paid by the Subdivider; provided, however, any additional costs for oversized lines that are not a direct benefit to said Subdivision or other property owned by said Subdivider, shall not be assessed against said Subdivision, but shall be paid by the City.
2. **Water.** The Subdivider agrees to design and install 8" matching water distribution lines, including Mueller fire hydrants (red), within or adjacent to said Subdivision per City approved plans and specifications. All costs for said water facilities shall be paid by the Subdivider; provided, however, any additional costs for oversized lines that are not a direct benefit to said Subdivision or other property owned by said Subdivider, shall not be assessed against said Subdivision, but shall be paid by the City.

3. **Storm Water Management.** The Subdivider agrees to design and install storm sewer facilities within and adjacent to said Subdivision per City approved plans and specifications. All costs for said storm sewer facilities shall be paid by the Subdivider; provided, however, any additional costs for oversized lines that are not a direct benefit to said Subdivision or other property owned by said Subdivider, shall not be assessed against said Subdivision, but shall be paid by the City.
4. **Streets/Paving.** The Subdivider agrees to design and install public Streets/Paving within said Subdivision per City approved plans and specifications. The Subdivider agrees to construct future connections to adjacent properties at the time of development of adjoining lands at the Subdivider's cost. At a time whence the Subdivider and/or all succeeding property owners, upon dedication of said streets to the public, may petition the City to create all paving by a special assessment project. Such petition shall waive any required resolution of necessity, any applicable limitations of the amount which could be assessed against subdivision property owners including intersection costs.
5. **Sidewalks.** The Subdivider agrees that the construction of sidewalks within said Subdivision shall be provided on both sides of the street, by the Subdivider and/or all succeeding property owners, and shall be constructed per City approved plans and specifications, and installed on each lot concurrently with construction of improvements upon such lot.
6. **Electrical Infrastructure.** The City agrees to install all electrical infrastructure needed to serve the Subdivision, provided that the Subdivider pays the Developer and Aid to Construction fees outlined on the Major Subdivision application, and provides adequate utility easements on the Final Plat, as determined by the City Electric Power and Resource Director. In addition, electrical infrastructure will not be installed until final grade is established with no obstructions.
7. **Street Signs.** The City agrees to install all Street signs at all intersections as per City Standards and the Manual of Uniform Traffic Control Devices as it deems necessary and to assume all costs for same.
8. **Erosion Control.** The Subdivider shall provide at Subdivider's expense all erosion control which shall be performed by seeding the area covered by the Subdivision, controlling erosion of areas disturbed by grading operations, constructing temporary terraces on slopes, temporary silting basins, swills and spillways. In addition to the above, the perimeter of said Subdivision shall be enclosed by silt fencing and whatever further measures are necessary to prevent erosion, damage and sedimentation to adjacent properties and public rights-of-way.
9. **Park and Open Spaces.** Land for park and open space shall be provided by the Subdivider as public open space and/or park improvement for said Subdivision. Land shall be dedicated for public use in accordance with ULDO 410-41.5, Parks and Public Facilities,

specifically in the amount of acres as required by sub-section B Park Reservations, (1) Neighborhood Park Dedication, of 0.006 acres per total single-family detached dwelling units and 0.004 acre per unit of other types of housing in the proposed Subdivision. Land shall either be adjacent to the public circulation system or connected to it by means of at least two pedestrian corridors. The park or open space shall be provided with a continuous concrete sidewalk five (5) feet in width that connects to the public sidewalk at a minimum of two locations. Alternatively, fees will be accepted in lieu of land and these fees will be equivalent to the cost of 0.006 acre per single-family detached dwelling unit and 0.004 acre per unit of other types of housing. For phased development, parks and open space shall be fully developed within the phase that includes the dedicated land. Park and open space shall be maintained by the Subdivider or a property owner's association on a permanent and continuous basis.

10. **Perimeter Fencing.** All street-facing property boundaries shall be provided with a privacy fence parallel to and two feet inset from the public sidewalk. The fence shall be a manufacturer and model selected by the City for consistency in color, appearance and durability. If the prescribed fence model becomes discontinued, the City shall select a replacement for use by all subsequent property development. The fence shall be 6 feet in height, constructed of virgin PVC with titanium dioxide pigment for UV resistance, and shall be provided with a three (3) foot gate to allow access to the property owner for maintenance of the right-of-way. The fence shall be installed as soon after development as weather shall permit, but in any event within twelve (12) months of occupancy. The fence and gate shall be maintained and replaced, when necessary, by the property owner.
11. **Engineering.** It shall be the Subdivider's responsibility at Subdivider's cost, which is not reimbursable, to have all plans and specifications for the construction of Sanitary Sewer, Water, Paving & Storm Sewer Districts drawn to the City of Seward specifications together with all necessary documentation for bid letting. Said plans and specifications shall be approved by the City of Seward and any other appropriate State agencies prior to bid letting.
12. **Sale of Lots and Special Assessments.** Any levied and unpaid special assessments which are liens upon a lot within said Subdivision shall be paid in full on or before the closing of the sale of any lot within the Subdivision.
13. **Replatting and Special Assessments.** Any levied and unpaid special assessments which are liens upon a lot within said Subdivision shall be in paid in full prior to the approval by the City of any replatting of said Subdivision.
14. **Relocation of Utilities upon replatting.** The cost of any relocation of public utilities or apparatus necessitated by the replatting of any lots or the Subdivision shall be borne by the Subdivider.

15. **Binding Agreement.** This Agreement shall run with the land and shall be binding upon and inure to the benefit of the parties hereto, their successor, assigns, devisees and legatees. Where the term "Subdivider" is used in this Agreement, the subsequent owners of any lots in the Subdivision shall be responsible to perform any of the conditions of this Agreement if the Subdivider has not performed such condition.
16. **Construction/Development Lots.** Development of structures on any lots within said Subdivision shall not occur until all improvements have been installed and accepted by the City of Seward or other appropriate authority.
17. **As-built Construction Plans.** A full set of construction drawings which incorporate all changes made during the construction process shall be submitted to the City upon completion of construction of the Subdivision. Said drawings shall be provided in both paper and digital spatial formats, specifically the following formats; three (3) sets, full size (Architect D size) paper copies, and in digital GIS format, meaning at least one of the following file types; shapefile (.shp or .shx or .dbf extensions), personal geodatabase (.mdb), or file geodatabase (.gdb).
18. **Markers.** The Subdivider agrees to complete the installation of permanent parcel markers prior to construction on or conveyance of any lot within the Final Plat.
19. The Subdivider agrees to comply with the provisions of ULDO, Article 39, Subdivision Design Criteria and General Standards Construction, including 410-39.2 Site Design and Constraints, grading and erosion control plans, NPDES permits, etc. Final grading plans must be submitted with the Final Plat.
20. This Agreement shall be recorded with the Seward County Register of Deeds upon the recording of the Final Plat for Prairie View Addition.
21. This Agreement and all obligations of the Subdivider shall apply to the Subdivision including all of the lots legally described in Exhibit 'B' to this Agreement.
22. Subdivider guarantees the completion of all improvements as required by City of Seward ULDO Article 42, Improvement Financing and Guarantees, including 410-42.3. The Subdivider agrees to comply with 410-42.4 Performance Guarantees, and will provide an Agreement for Escrow of Security Fund attached hereto as Exhibit 'C'.
23. An Ownership Certificate for the property included within the Final Plat is attached hereto as Exhibit 'D' to this Agreement.

Dated this ___ day of _____, 2022.

SUBDIVIDER:

1640, LLC, a Nebraska limited liability company

By: Michelle S. Benes Revocable Trust dated May 21, 2003, Managing Member

By: _____
Michelle S. Benes, Trustee

By: Robert L. Benes Revocable Trust dated May 21, 2003, Managing Member

By: _____
Robert L. Benes, Trustee

STATE OF NEBRASKA)
) ss.
COUNTY OF LANCASTER)

The foregoing was acknowledged before me this ____ day of _____, 2022, by Michelle S. Benes, Trustee of the Michelle S. Benes Revocable Trust dated May 21, 2003, Managing Member of **1640 LLC**, a Nebraska limited liability company, on behalf of the limited liability company.

Notary Public

STATE OF NEBRASKA)
) ss.
COUNTY OF LANCASTER)

The foregoing was acknowledged before me this ____ day of _____, 2022, by Robert L. Benes, Trustee of the Robert L. Benes Revocable Trust dated May 21, 2003, Managing Member of **1640 LLC**, a Nebraska limited liability company, on behalf of the limited liability company.

Notary Public

CITY:
City of Seward, Nebraska

Attest:

By: Derek Bargmann ~~Bonnie Otte~~, City Clerk

By: Josh Eickmeier, Mayor

STATE OF NEBRASKA)
) ss.
COUNTY OF SEWARD)

The foregoing instrument was acknowledged before me this ____ day of _____, 2022 by _____, Mayor, and _____, City Clerk, of the City of Seward, on behalf of the City.

Notary Public

EXHIBIT 'A'
FINAL PLAT

DRAFT

EXHIBIT 'B'
LEGAL DESCRIPTION OF LOTS IN SUBDIVISION

DRAFT

EXHIBIT 'C'

PRAIRIE VIEW ADDITION

AGREEMENT FOR ESCROW OF SECURITY FUND

WHEREAS, before any final plat may be approved, the required improvements must have been installed or a performance bond, escrow or security agreement must be furnished to the City of Seward, Nebraska to guarantee the installation of the required improvements; and

WHEREAS, 1640 LLC, a Nebraska limited liability company, hereinafter called "Permittee", has made application to the City for permission to construct improvements consisting of:

<u>Improvement</u>	<u>Amount</u>
Sanitary Sewer	\$ _____
Water Distribution	\$ _____
Storm Water Management	\$ _____
Streets/Paving	\$ _____

within the final plat of Prairie View Addition, an addition to the City of Seward, Seward County, Nebraska and guarantee the same by placing funds in an escrow account as security for performance of said construction.

NOW, THEREFORE, IT IS AGREED by and between Permittee and the City of Seward, Nebraska, a municipal corporation, hereinafter called the "City", as follows:

1. That prior to approval of the aforesaid final plat, Permittee shall either deposit the sum of _____ Dollars (\$ _____) with _____ Bank ("Bank") as escrow agent for the City, or obtain a loan of immediately payable funds from Bank in said amount and irrevocably pledge and assign said funds to Bank as escrow agent for the City, the same to be held in escrow as security to guarantee the construction of the aforesaid improvements within said final plat.

2. The said escrow fund shall be allocated to the above-specified improvements in said final plat as follows:

<u>Improvement</u>	<u>Amount</u>
Sanitary Sewer	\$ _____
Water Distribution	\$ _____
Storm Water Management	\$ _____
Streets/Paving	\$ _____

3. The funds designated for any one improvement less the retainage, if any, may be released from escrow when that improvement is completed to the satisfaction of the City and the

City has certified to Bank in writing that construction has been completed for that improvement; provided, that all other funds in the escrow account designated as security for remaining uncompleted improvements shall remain in escrow until the improvements for which said funds have been designated has been completed. In the event any or all of the aforesaid improvements are not completed to the satisfaction of the City by the completion dates listed in the conditions of approval for said final plat or replat to do said construction, whichever is earlier, then and in that event Bank upon written request from the City, shall pay to the City the total amount of funds designated for each of the aforesaid improvements which shall not have been completed on said date or the amount of funds necessary to complete construction thereof, whichever is the lesser.

4. The conditions of release of the escrow funds upon completion of the improvements set forth in paragraph 1, supra, shall include payment in full of any and all costs due to the City by Permittee in connection with the development and construction of such improvements including, but not limited to, engineering costs, inspection costs, and survey costs.

5. This Agreement shall be contingent upon its execution by the parties hereto, the pledge and assignment of the required security funds with Bank as escrow agent for the City of Seward, and the acceptance of this Agreement by said escrow agent.

6. Permittee agrees to pay any and all fees charged by Bank as escrow agent for the City of Seward under the terms of this Agreement.

7. Bank shall be liable as a depository only.

8. Upon deposit of the security fund as provided in this Agreement, the City agrees to waive the requirement that Permittee post performance bonds for completion of the aforesaid improvements.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed this _____ day of _____, 2022.

PERMITEE:

1640, LLC, a Nebraska limited liability company

By: Michelle S. Benes Revocable Trust dated May 21, 2003, Managing Member

By: _____
Michelle S. Benes, Trustee

By: Robert L. Benes Revocable Trust dated May 21, 2003, Managing Member

By: _____
Robert L. Benes, Trustee

CITY:

Attest:

City of Seward, Nebraska

By: Derek Bargmann ~~Bonnie Otte~~, City Clerk

By: Josh Eickmeier, Mayor

DRAFT

ACCEPTANCE OF ESCROW AGREEMENT

Frontier Bank (“Bank”) hereby agrees to the terms and instruction listed above and acknowledges that it has accepted a deposit of _____ Dollars (\$_____) or an irrevocable pledge and assignment of immediately payable funds in said amount from 1640 LLC (“Permittee”) to be held in escrow (Note No. _____) by Bank as escrow agent for the City of Seward, Nebraska, a municipal corporation (“City”), to ensure construction of the improvements listed in the above and foregoing Agreement and further agrees not to release any of said monies or irrevocable pledges held by Bank to secure construction of said improvements until it has received written authorization from the City in accordance with the foregoing Agreement.

Dated this ____ day of _____, 2022.

Attest:

_____ **BANK** (Bank)
_____ (Address)

By: _____
Name: _____
Title: _____

By: _____
Name: _____
Title: _____

EXHIBIT 'D'
OWNERSHIP CERTIFICATE

4814-4553-9921, v. 1

DRAFT

ADMINISTRATIVE ITEMS

1. Request from the Suicide Prevention Coalition for the 2022 Walk for Hope to be held on April 2nd
 - A. Permission for Suicide Prevention Coalition to Utilize the Plum Creek Trail for Event



**Walk for Hope - Seward County Suicide Prevention Coalition
Plum Creek Park
April 2nd, 2022, 5:00 pm- 8:00 pm**

Name (First and Last): _____

Home Address: _____

City, State & Zip: _____

Phone number: _____ Email: _____

T-Shirt Size: _____ Adult Small _____ Adult Medium _____ Adult Large

_____ Adult X-Large _____ Adult XXL (\$2.00 more)

Registration Fee: (Checks can be made out to Seward County Bridges)

_____ Student - \$5.00 Registration _____ Concordia

_____ Community member - \$10.00 Registration

How did you hear about the Hope Walk? _____

Waiver and Release of Liability *

By signing this waiver, I understand that I am voluntarily participating in the Seward County Suicide Coalitions Walk for Hope Suicide Prevention walk at my own risk and my own request. I hereby waive all claims against the Seward County Suicide Coalition, City of Seward, sponsors, or any event personnel, paid or volunteer, for any injury that I might suffer in this event or under any circumstances. I also grant full permission for the free use of my name, picture and voice in any broadcast, telecast, print account or any account in any medium used in connection with this event or future events of the Seward County Suicide Prevention Coalition

Signature: _____ Date: _____

Registration forms can be dropped off at all school offices (students only) or be mailed/dropped off at Seward County Chamber and Development Partnership. 616 Bradford St. Seward, NE 68434

- B. Permission for Suicide Prevention Coalition to Offer Vendor Sales in the Plum Creek Sports Complex Parking Lot
- 2. Resolution Amending Policy for Job Description Changes, Allowing for City Administrator Discretion for Non-Appointed Positions - City Administrator Butcher



P.O. Box 38, 537 Main Street, Seward, Nebraska 68434. Phone: 402-643-2928. Fax: 402-643-6491. www.CityofSewardNE.gov

Date: February 15, 2022

To: *Seward City Council*

From: *City Administration*

Re: **City Administration Discretion in Revising Non-Appointed Job Descriptions**

City Administration is bringing forth Resolution 2022-11 with the objective of revising the method in which job descriptions are reviewed and revised. Currently, all updates to job descriptions are reviewed at the departmental head level with suggestions provided to City Administration; reviewed and recommendations made by City Administration; placed on a Council agenda; and presented for approval at a City Council meeting. Job descriptions are typically reviewed on an as-needed basis as job vacancies arise or within five years of last review to ensure they are reflective of the current responsibilities of the position. In the case of filling a vacancy for non-appointed positions, the time between City Administration recommended changes and City Council approval can span weeks and as such, we would like to revise this process to quicken our hiring process. This resolution will allow discretion and authority for the City Administrator to approve revision to job descriptions for non-appointed positions. Again, the benefit will be speed in filling any vacancies as well as a lessened burden for Council to review and approve these requests.

The process for job description revision of appointed positions—department heads—will utilize the traditional process of Council review and approval. Additionally, any elimination, creation or revision to titles of City positions will require an ordinance change and will still be presented to Council for approval as has previously occurred.

NOTE: This topic was discussed at the January 18th Personnel, Finance and Audit Committee with no objection to this revised process.

RESOLUTION NO. 2022-11

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF SEWARD, NEBRASKA,
APPROVING A COUNCIL POLICY STATEMENT

WHEREAS, the City Council has determined that it is necessary and desirable to create Council Policy Statements as a means of establishing guidelines and direction to the members of the City Council and to the City Administration in regard to various issues which regularly occur; and

WHEREAS, the City Council desires to establish a Council Policy Statement entitled "Process for Reviewing and Revising Job Descriptions".

NOW, THEREFORE, BE IT RESOLVED, that the Mayor and City Council of Seward, Nebraska, do hereby approve the Council Policy Statement entitled, "Process for Reviewing and Revising Job Descriptions, 2022-001" and do further hereby direct the distribution of said Council Policy Statement to the appropriate City Departments.

Passed and approved this _____ day of February, 2022.

THE CITY OF SEWARD, NEBRASKA

ATTEST:

Joshua Eickmeier, Mayor

Derek Bargmann
City Clerk

(SEAL)



P.O. Box 38, 537 Main Street, Seward, Nebraska 68434. Phone: 402-643-2928. Fax: 402-643-6491. www.CityofSewardNE.gov

COUNCIL POLICY STATEMENT

2022-001

Dated: 2-15-2022

Process for Reviewing and Revising Job Descriptions

The purpose of this policy statement is to establish a uniform process for the review and revision of job descriptions. The following process will occur should a job description review be undertaken for non-appointed positions:

1. The current job description shall be reviewed by corresponding Department Head;
2. The recommendations provided by the corresponding Department Head will be presented to City Administration for review and consideration;
3. City Administration will revise, approve and sign any job descriptions should they determine the job description adequately describes the current responsibilities of the position; and
4. The revised job description will be uploaded to the 'Employee Information' section of the City website and will be maintained by the Human Resources Director.

The following process will occur should a job description review be undertaken for appointed positions:

1. The current job description shall be reviewed by City Administration to determine if the job description adequately describes the current responsibilities of the position;
2. The recommendations provided by City Administration will be presented to the City Council for consideration, review and approval; and
3. The revised job description will be uploaded to the 'Employee Information' section of the City website and will be maintained by the Human Resources Director.

REPORTS

1. City Administrator's Report - City Administrator Butcher

CITY ADMINISTRATORS REPORT – 3/1/22

- Monitoring a number of street projects Waverly Road (electrical work and grading), design work on East Seward and East Hillcrest.
- Covid-19 response to inquiries and issues, no known employees out.
- Working on finalizing grants for Petsource/Rail Campus – EOP.
- Assisting City Attorney with a number of real estate items and related matters.
- Covid-19 Unified Command Calls.
- Briefed with Wellness Center Committee on a number of items related to CCCFF Grant, Sales Tax Agenda Item, and design matters.
- Reviewed a number of floodplain permits.
- Assisted with planning for annual awards banquet.
- Held Feb. 17th DTR Open House with SENDD and SCCDP.
- Reviewed items for Petsource expansion TIF application.
- Reviewed items for Golf 2022 season, including survey, update emails, and advertising auction.
- Worked with Ameritas on amendment item to City's offered 457 plan.
- On vacation from February 18th – 21st.
- Met with staff on Prairie View Development Watermain items.
- Attended 5 hours of NDOT Stakeholder meetings for the Highway 15 Reconstruction/Resurfacing Project (Ash Street to Pinewood Ave).
- Reviewed and attended online meetings for Petsource Expansion related to site prep and electrical work.

The departments are working on the following projects to name a few:

Police Department

- Officer I Civil Service process.
- Attended NDOT Stakeholder meeting on Highway 15 project.
- E911 Meeting.
- Working on City Employee ICS training.

City Clerk/Human Resources/City Hall

- Finalizing items for the Awards Banquet Saturday March 5th at Senior Center.
- Booked harassment training for all employees based upon handbook amendments recently completed.
- Updates to Handbook drafted and sent to City Administrator.
- Working with Safety Committee on new injury prevention plan.
- Working with Civil Service process for Police Officer I opening.

Water/Wastewater Department

- Monitoring and testing for SEH for design of new WWTP.
- Bio solids report.
- Flushing sanitary manholes on checklist.
- Full disconnect and cap at 8th and Jackson for new water tower site (weather dependent).
- Working on CIP gas pump project.

Parks and Rec/Cemetery/Golf/Pool

- Golf Team preparing survey and items for 2022 Season.
- Staff attending Odey's Field and Turf Day meeting. (Questions about drought conditions.)
- Trimming trees.
- Servicing Equipment.

- Plum Creek Sports Complex parking lot is rocked, now setting rebar for bumpers.

Civic Center

- Meetings as usual.

Electric Department

- Working on Petsource expansion items.
- Attended NDOT Stakeholder meeting on Highway 15 project.
- Testing new AMI meter system.
- Working on mapping updates.

Street Department

- Trimming trees and items in alleys.
- 811 Training in Lincoln.
- Sign replacements.

Library

- Training new library clerks.
- Spring programs for kids run through March.
- Planning for Summer Programs.
- National Library Week (April) Planning.

Building Inspection/Planning Department

- The Planning Commission will be meeting Monday, February 28 instead of the 14th for the Prairie View Subdivision that will be held at the Library upstairs meeting room.
- Glaser House Site – Hartmann will be removing foundation.
- Kayton Apts (Lincoln and N. Columbia will begin footings for buildings 3 and 4.
- Attended NDOT Stakeholder meeting on Highway 15 project.
- Regular inspections and plan reviews.

Engineering

- Highway 15 widening coordination for public and stakeholder meetings in February and March.
- Attended 5 hours of NDOT Stakeholder meetings for the Highway 15 Reconstruction/Resurfacing Project (Ash Street to Pinewood Ave).
- Biosolids report for the Wastewater Plant.
- Edits to site plans, SRF funding application, tower logo design, communication provider requirements.
- Update Facilities Plan for WWTP Upgrade.
- Finalize East Seward Street County project.

Finance Dept.

- Payroll & claims.
- Distribute TIF receipts.
- Follow up work on chart of accounts and 457 plan amendments.

**FUTURE REQUESTS FOR COUNCIL AGENDA ITEMS OR ADMINISTRATIVE
ACTION
ANNOUNCEMENT OF UPCOMING EVENTS
MOTION TO ADJOURN**

I, Derek Bargmann, the duly appointed qualified and acting City Clerk of the City of Seward, Nebraska, hereby certify that the foregoing Notice of Meeting and Agenda for such meeting has been posted in the following places: Seward City Hall, Seward Municipal Building, Seward County Courthouse, Seward Memorial Library and CityofSewardNE.gov

IN WITNESS WHEREOF, I have hereunto set my hand officially and affixed the seal of the City.

Derek Bargmann, City Clerk

Date